NUL

6 1939

# LACKHAWK



SOCKET, OPEN-END & BOX-TYPE WRENCHES FADER

evn out yed for intended.

ackhawks"

NEW . . . 99DD WRENCH - BENCH & NUGGET ASS'T Exclusive stamping its owner quality workman of

**NEW DOUBLE-DUTY SOCKET V** MADE OF HEXITE . . . THE

BLACKHAWK MF

Catalog No. 239

and Washington.

wk wrench has above-average ability.

Blackhawk wrenches - long the leaders in their field have constantly grown in demand. This demand justifies Blackhawk's policy of specializing exclusively in highquality wrenches - distributed through recognized jobbers.

For a double-guarantee -Always buy wrenches from your Blackhawk jobber or jobber salesman!

# BLACKHAWK WRENCHES

FOR AUTOMOTIVE, AEROMOTIVE, TRUCK, TRACTOR, CONSTRUCTION, INDUSTRIAL AND SPECIALTY WORK

GUIDE TO WRENCH & SOCKET SIZES FOR BOLTS & NUTS... To order wrenches use sizes in center column

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Sockets .															÷		·		9	
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Torkflash	7	ì	r	15	i	)	n	V	V	r	e	n	c	h					13	

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#### ID WRENCHES

Open-En	ds	٠.	,	٠.	.36-37
-Ends &	Sets	٠.	٠	٠.	. 38-39

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U. Boits	S.S.	S.A.E.	Ameri Sto Bolts	can	Mfrs. Std.	NOMINAL SIZE OVER FLATS	U. Bolts	S.S.	U.S.S. or Am. Std.	Amer. Std. Bolts	Mfr Std
and Nuts	Cap Screws	and Nuts	and Nuts	Cap Screws	Bolt Heads	SIZI	and Nuts	Cap Screws	Set Screws	and Nuts	Bol Head
			0 & 1			A		- 5		0 & 1	
			2 & 3			1/2		4.61		2 & 3	
- 1			4			3/4		_		4	
5/8	3/6		5 & 6	Total I		A				5 & 6	
			8			11				8	
4	- 14	- 1/	10	, ,,	1/	36			3/6	10	1/4
	1/4	1/4	12 & 1/2	1 1/4	3/4	19	-	*	19_	12 & 1/4	1
3/4	A			4	1,110	1/2	3/4	3/6	3/6	grane.	
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	3/8_	36	- Ac	36		18		1,4	10	- 1/4	46
· Or	78	7a	3/6	rie .	3/8	11 96		1/2	34	36	
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3/8						14	34	Ť.		25	
	1/2	1/2	- 1	1/	70	14	1000	36	34	X	- 17
76	7/2	72	10	1/2		34	178	73	14	19	<i>y</i> <sub>2</sub>
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3/6		4	17	7/		11/4	- 16			17	
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3/4	1	1,1				154	1/4	1	1%		
1000			76	1	17.00	1 /4		111		76	7/8
3/8	11/8	-1-			76	1 1/8	76	156			
5/1	11/4		1	13%		11/2	78		11/2	1	1
					1	176			117		
1	136	11/8				13/8	1			122	
		-	11/4	11/4	13%	134	Constant			136	11/6
11/6		11/4	-1		1 7%	1   8	11/6	-			
			11/4			176				134	134
111		127			11/4	1   B	111				
134	12474	134	136			2	134				136
			- 78		136	25%	200				7.0
13%		11/2		pull		21	136				
-1//-			11/2		11/2	21/4				11/4	11/2
134			-		1 1/2	2 ¼ 2 ¾	11/5				
/*			154			274					136
			(In-		15%	21/2			-		
156			1.1/			218	156			1.92	1.1/
_			134	11.5	134	256		-		134	144
11/4	13.31	2.11	-		-	23/4	134				
			The same		CO.	2 11				1000	
124	17.11		174		176	276	176				176
174		New York	2			3	1 5/9			2	
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214	-				214	31/2	234	70.			234

BLACKHAWK WRENCHES

# PRICE LIST AND INDEX

t IV/VI	List	User		Units Weig	ch		List	User		Jnits in	We
lo.	Price	Net	Page (		02.	Ne.	Price	Net	Page		Lb.
		SETS				LOO	SE WR	ENCHE	s—c	ntin	ued
BCB	\$ 9.80	\$ 5.88	37	1 2	8	402 402 P	-75	.45	39	10	
LR	10.60	6.36	37	1 2	10	402B 402C	.75 .75	.45	39	10	
10ND 12ED	7.15	43.74	27 29	1 1 1	35	403	.75	.45	39	10	
12SD	35.25	21.15	29	1 23	8	404	.80	.48	39	10	
13CB	19.50	11.70	37	1 5	9	*404B *404C	.80 .80	.48	39 39	10	
13PD 14BD	13.50 47.60	8,10 28.56	27 29	1 5	6	405	.80	.48	39	10	
16ND	11.50	6.90	27	1 1	8	*406B	.85	.51	39	5	
I6QD	24.85	14.91	27	-1 7	14	*406C 420	.85	.51	39	10	
17K 17TD	21.60 19.50	12.96	12 28	1 5	4	422	.75 .75	.45	39 39	10	
8CB	6,95	4.17	38	1	8	424	.80	-48	39	10	
18LR	7.65	4.59	38	1	9	426 *1020	1,00	.60	39 38	.5	
20CB 20LR	2.90 3.30	1.74	38	1	5	1021	.50 .55	.30	38	10	
22CB	5.10	3.06	38 39	1 1	12	*1022	.70	.42	38	10	
22LR	5.80	3,48	39	1 2	2	1023	.70	.42	38	10	
26CB	7.35	4.41	38	1 3	2	*1024 1025	.80	.48	38 38	10	
26LR 30CD	8.20 44.00	4.92 26.40	38 28	1 3	4	1026	1.00	.60	38	10	
30K	49.85	29.91	12	1 13		1027	1.00	.60	38	10	
45CB	72.00	43.20	28	1 38	В	1027 C *1028	1.00	.60	- 38 38	10	
50B 70R	97.00 116,00	58.20 69.60	12	1 49		10285	1,20	.72	38	10	
70DS	148,00	88.80	24	1 177	100	1029	1.20	.72	38	10	
77K	62.00	37,20	11	1 30		1030 *1031	1.20 1.60	.72	38	10	
77L 80DS	49.40 168.00	29.60 100.80	11 24	1 23 1 186	8	*1032	1.60	.96	38	5	
60RRS	163.00	97.80	23	1 143		*1033	1.60	.96	38	5	
90DS	180.00	108.00	24	1 185	L'	1033A *1033C	1,60 2.20	.96 1.32	38 38	5	1
90W 99DD	158.00 192.00	94.80 115.20	25 10	1 113		1034	2.20	1.32	38	5	i
99DD	200.00	120.00	10	1 237		1035	2,20	1.32	38	5	1
100DS	201.00	120.60	24	1 191		*1036	3.00	1.80	38 38	5	1
100W	183.00 4.80	109.80	25 39	1 118	12	1037 *1721	.55	.33	38	10	1
400CB 400LR	5.50	3,30	39	1 1 2	12	*1722	.55	.33	38	10	
412CB	6.20	3,72	39	1 2		*1723	,55	,33	38	10	
412LR	7.00	4,20	39	1 2	4	1723A *1725	.70 .80	.42	38	10	
19051 19055	16.35 13.00	9.81 7.80	19 18	1 3	12	1725A	.80	.48	38	10	
19056	3.05	1.83	32	- 1	8	*1725B	.80	.48	38	10	
19057	8.60	5.16	32	1 4	1	1726 *1727	1.00	.60	38	10	
19058 19059	8.60 5.45	5,16 3.27	32 32	1 3	12 12	1728	1.20	.72	38	10	
19074	9,65	5.79	32	1 1	6	*1729	1.20	.72	38	10	
19082	8.15	4.89	19	1 1	11	1731 *1731A	1.60	.96	38 38	5	
19083	6.20	3.72	18	1 1	4	1731B	1.60	.96	38	5	E.
CA		CASES	28-29	1 9		1733 *1734 1735	2,20 2,20 3,00	1.32 1.32 1.60	38 38 38	5 5 5	1
CA CB	5.20 9.75	3.12 5.85	11-28	1 19	8	*1736	3.00	1.80	38	5	i
DD East	121.00	72.60	10	1 222		*1737	3.00	1.60	38	5	i
DD West	128.50	77,10	10	1 222		*2561 2581	1.80 2.60	1.0B 1.56	39 21	10	
DS East DS West	65.00 71.25	39.00 42.75	24 24	1 145		2583	3.40	2.04	21	5	
E	10.35	6.21	29	1 13		3327	.60	.36	18	5	
E N-4	1.15	.69	27	1	8	3329 3731	.60	.36	18 18	5	
P Q	1.55	2.16	27 27	1 1	10	*4016	1,90	1.14	33	5	
Ř	3.60 23.75	14.25	22-23	1 56		4020	.55	.33	36-37	5	
RS	22.50	13,50	23	1 44		4028 4033C	1.35 2.40	1.44	36-37 36-37	5	
T W	2.00 35.00	1.20 21.00	28 25	1 74	10	*4124	1.00	.60	33	5	1
19508	20.00	12.00	25 12	1 36		*4316	1.10	.66	33	5	1
19515 19516	4.00	2.40 1.20	12	1 4	B 12	4721 4723	.60 .70	.42	36-37 35-37	5	
19310	LOOS				14	4725 4725B	1.00	.54	36-37 36-37 36-37 36-37 36-37 36-37 36-37 36-37	5 5	
E2 E3	.55	.33	38 38	5 5	- XXXXXXXXXXX	4727 4729 4730A	1.10 1.35 1.65	.66 .81 .99	36-37 36-37	5 5 5	
E4	.55	.33	38	5	1/4	4731A	1.75	1.05	36-37	5	
E5	.55	.33	38	5	14	4735A	2.85	1.71	36-37	5	1
E6	.85	.51	38	5	1/2	4737 5204 X	3.30 4.00	1.71 1.98 2.40 2.70	36-37 34	5	3
E7 E8	.70	.42	38 38	5	12	5204 X	4.50	2.70	34	1	3
E9	70	.42	38	5	1/4	5206	9.00	5.40	35	1	11
E10	.70	.42	36	5	3/3	5220	.65	.39	34	5	1
EII H1	1.10	1.11	38 21	5	1	5222 5224	.65	.39	34 34	5	1
HIO	.55	.33	38	5		5226	.55	.33	34	5	1
H12	.55	,33	38	5	1/4	5228	.65	.39	34	5 5	1
H14	.60	.36	38	5	3/4	5401 5434	1.40 2.60	1.56	35 35	5	2
H16 H18	.60	.36 .36	38 38	5	1	5440	2.60	1.56	35	5	3
T13	.35	.21	14	555555555555555555555555555555555555555	2	5448	3.00 2.30	1.80	35	5	4
100A	2.00	1.20	39	5	4	12001	2.30	1.38	21	5	
100B 151	2.00 4.35	1,20 2.61	39 33	5 5 1	13	12002 15119	2.30 1.75	1.38	21 40	5	2
152	2.30	1.38	33	5	13	15137	2.30	1.38	40	5	3
200AB	2,60	1.56	39	5	4	15138	2.30	1.38	40	5	3

\*To Be Discontinued—Do Not Reorder. †West Coast Prices Apply in Arizona, California, Idaho, Nevada, Oregon, Utah and Washington.

#### BLACKHAWK GUARANTEE

All Blackhawk wrenches are guaranteed against defects both in workmanship and material. Free replacements or repairs will be made on all wrenches that do not stand up to this guarantee.

Replacements will not be made if inspection shows that handles or sockets have been hammered or used with Stillson wrenches for extra leverage—handles or sockets have been ground thinner or changed in design—sockets have been used on over or undersized nuts—undue leverage has been exerted—tools have been worn out from use or employed for purposes other than intended.

# BE A LEADER

— Own "Blackhawks"

Each Blackhawk wrench has more than above-average utility — stamping its owner a quality workman of above-average ability.

Blackhawk wrenches — long the leaders in their field have constantly grown in demand. This demand justifies Blackhawk's policy of specializing exclusively in highquality wrenches — distributed through recognized jobbers.

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# PRICE LIST AND INDEX (Cont'd)

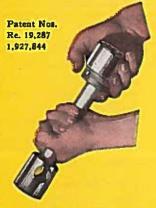
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No.	List Price	User Net	Page	Units in Cart.	Weight Each Lb. Oz.	No.	List Price	User Net	Units in Page Cari	Each
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		ENCHE			ued	LOC		ENCHE:		
15139	2.60	1.56	40 40	5	2 4	21106 21108	.45	.27	18 5 18 5	12
15140 15612	.95	.57	30	5	21/2	21110	.45	.27	18 5	1/4
15613 15614	1.00	.60	30	5	31/2 5	21112 21114	.55 .55	.33	18 5 18 5	XXXX
15620	1.70	1.02	30	5	1	21116	.55	.33	18 5	
15622 15623	1.00	.60	30	5	5	24992 24993	4.00 2.00	2.40 1.20	14 5 20 5 15 5 21 5 17 5 15 5 17 5	5
15624	1.30	.66	30	5	6 8	24994	1.50	.90	20 5 15 5	1 2
15625	1.50	.90	30		11	24995	1.70	1.02	21 5	4
15626 15627	1.70 2.00	1.02	30	5 5 5	1 4	24996 24997	1.05	.63	17 S 15 S	15/1
15627 15629	3.20	1.92	30	5	2 1	24998	1.20	.72	17 5	31/4
- 15630 15632	4.15 1,00	2,49	30	5	2 1	24999 30008	2,00	1,20	15 5 18 5 18 5 18 5	3.
15633	1.10	.66	30	5	61/2	30010	.70	.42	18 5	1
15634	1.30	.78	30	5	8	30012	.70	.42	18 5	1
15635 15636	1.50	1.02	30	5 5 5	1 11	30014 30016	.70	.42	18 5 18 5 18 5 18 5	1
15637	2.00	1.20	30	5	1 3	30018	.70	.42	18 5	11/4
15638 15639	3.85 4.85	2.31 2.91	30	5	1 14	30020 30022	.70	.42	18 5 18 5	2
15647	1.15	.69	30	5	21/4	30024	-80	.48	18 5	2 2
15648 15649	1.25	.75 .87	30 30	5 5 5	21/4 21/4 21/4	3010B 30110	.80	.48	18 5 16 5	!
15650	1.60	.96	30	5	31/4	30112	80	.48	18 5	11/2
15651 15652	1.90	1.14 1.38	30	5	8	30114 30116	.90	.54	18 5	15/4
15659	1.70	1.02	30	5 5 5	51/2	30212	2.60	1.56	18 5 18 5 18 5 18 5 18 5 18 5 18 5 20 5	11/2 11/2 2 2
15660	2.25	1.35	31	5	5½ 5½ 12	30214	2.60	1.56	20 5	2
*15680 *15681	2.70	1.62	31	1	12	30216 30218	2.60 2.60	1,56 1,56	20 5 20 5 20 5	2 2 2
*156B2	3.10	1.86	31	1	13	30220	2.60	1.56	20 5	2
*15683 15684	3.10 3.35	1.86 2.01	31	1	14 15	30222 30224	2.75	1.65	20 5 20 5	21/2
15685 15686	3.75	2.25	31	i		30314	.90	.54	18 5	2
15686	4.85	2.91	31	1	2 2 2	30316	1.00	.54	18 5	2 2 2 3
15687 15688	4.85 5.85	3.51	31 31	1	2 2 2	30318 30320	1.00	.60	18 5 18 5	3
15689	5.85	3.51	31	1	2 3	30322	1.15	.69	18 5	4
15690 15691	6.10 6.35	3.66 3.81	31 31	1	2 4	30324 34964	1.25	.75 .48	18 5 9-20 5	1 2 1 3
15692	6.50	3.90	31	1	3 2	34981	6.25	3.75	.14 5	8
15693 15694	8.00 8.00	4.80 4.80	31 31	1 1	3 2	34982 34983	2.00 2.15	1.20	16 5 17 5	1 2
15695	9.50	5.70	31	i	3 7	34984	1.60	.96	17 5	7
15696 15697	10.00	6.00	31	- 1	3 7	34985 34986	.50 2.85	1.71	15 5 15 5 17 5 17 5 21 5 20 5 33 5 20 5	4
15698	14.60	8.76	31	1	4 12	34987	1.50	.90	17 5	8 4
15699	15.90	9.54	31	1	5 4	34988	1.40	.84	17 5	3
15700 15701	16.70 17.50	10.02 10.50	31	1	5 4	34990 34991	.30	.18	21 5 20 5	2
*15710	2.95	1.77	31	1	11	34992	1.25	.75	33 5	1 2 3
*15711 *15712	2.95 3.50	1.77 2.10	31	1	12 14	34993 34994	2.40 1.00	1.44	20 5 20 5	3 2
*15713	3,50	2.10	31	i	14	34995	1.00	.60	20 5	21/2
15714 15715	3.75 4.20	2,25	31	1	14	34996 34997	1.10	1.02	20 5 17 5 14 5	3
15716	5.85	3.51	31	t	2 2 2	34999	4.00	2.40	14 5	6 7
15717	5.85	3.51	31	1	2 4	35110 35112	.85 .85	.51 .51	9 5	1/2
15718 15719	6.25 6,25	3.75 3.75	31	1	2 4 2 3	35112	.85	.51	9 5	12
15720	7.25	4.35	31	1		35116	.85	.51	9 5	ï
15721 15722	7.60 8.00	4.56 4.80	31 31	1	3 1 3 2	35118 35119	.85 .85	.51	9 5	
15723	9.20 9.20	5.52	31	1	3	35120	.85	.51	9 5	11/2
15722 15723 15724 15725 15726 15727 15728 15729 15730 15731	10.50	4.80 5.52 5.52 6.30 6.75 7.50 9.54 10.80 11.25	31	1	3 2 3 8	35120 35121 35122 35124	.85 .85 1.05	.51 .51 .51 .51 .63	555555555555555555555555555555555555555	1 1 1 1 2 2 2 2 2 2 3 3 3 3 5 5 6 6 6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
15726	11.25	6,75	31 31	1	4	35124	1,05	.63	9 5	2
15727	11.25 12.50 15.90 17.10	7.50	31	1	4 2	35126 35128 35130	1.05	.63	9 5	3
15729	17.10	10.26	31	1	4 13 5 2	35130	1.05 1.35 1.35 1.65	.63 .81 .61 .99	9 5 9 5 9 5	3
15730	18.00 18.75 2.50 2,65	10.80	31	1	5 2	35132 35134	1.35	.61	9 5	3
* 15731 * 15741	2.50	1.50	31 31	1	5 8	35136	1.85	1.11	9 5 9 5 9 5 9 5	5
	2,65	1.59	31	1	1	35140	2.10	1.26 .54 .54	9 5	6
15743	3.75	2.25 3.24 4.95	31 31 31	1	2 8 3 12	35212 35214	.90	.54	9 5	11/4
15745	8.25	4.95	31	1	6 8	35216	.90	.54	9 5	13/4
15742 15743 15744 15745 15798 15829 15830 15831 15832 15833	5,40 8,25 .80 4,55 6,00 9,75 11,50 18,08	2.73 3.60 5.85	33	5-25	12	35216 35218 35220	1.00 1.35 1.35 1.35 1.35 1.35	.54 .60 .81	9 5	21/
15830	6.00	3.60	30	1	21/4	35224	1.35	.61	9 5	41/4
15831	9.75	5.85	30	1	61/4	35224 35314 35316 35318	1.35	.81	9 5	21/3
15832	18.08	6.90 10.85 .27 .27	30	1	1111/4	35310	1.35	.81	9 5 9 5 9 5 9 5	23/2
21006 21007	.45	.27	30 18 18	5	1/2		1,60	.96	9 5	3
21007	.45	.27		5	12	35322 35324 35326	1.60	.81 .96 .96	9 5	31/2
21008 21009	.45	.27	18	5	1/4	35326	1.60	.96	9 5	5
21010	.45	.27	18	5	1/4 1/4	35328	1.60	.96 .96 1.05	9 5 9 5 9 5	5
21011	.45	.27	18	5	1/2	35330 35332	1.60 1.60 1.60 1.75 1.75 2.10	1.05	9 5	5
21012 21014	.45	.27	18	5	1/2	35336	2.10	1.26	9 5	61/2
21014	.45	.27	18	5	3/6	35414	2.95	1.77	9 5	11/2
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\*To Be Discontinued-Do Not Reorder.

Blackhawk's exclusive "Lock-On" feature clicks sockets, handles and attachments into one solid tool. A springbacked plunger on all handles grips sockets securely. Combinations are quickly disengaged by simply pressing the convenient "Thumb Release" button on the socket.

The "Thumb Release" button, in the 7/16", 1/2", 3/4" and 1" square drive series, makes a release key unnecessary.

"Lock-On" saves time and temper. Sockets can not drop or slip off to cause damage or injury - a safety feature on overhead work or where sockets and attachments would cause extensive damage and loss of time if dropped in mechanism. This patented feature makes work fast, safe and sure.



Simply press the "Thumb Release" button-then pull - to unlock "Lock-On."

# PRICE LIST AND INDEX (Cont'd)

Cook   Weight   Complement	No.	List Price	User Net	Page	Units in Cart.		eight ach Oz.	No.	List	User		Units		ch
35416	-						uZ.		Price	Net	Page	Cart.		Oz.
39472 2.95 1.77 9 5 5 2 60030 1.25 7.75 19 5 5 2 7 5 19 5 5 5 10 5 10 5 10 5 10 5 10 5 10						ued	11/							
1.73	35418	2.95	1.77	9	5		11/2	60028	1.25	.75	19		2	4 B
1996   1.05	35420 35422		1.77		5		7	60030	1.25	.75	19	5		8
1989   1.05	35424	3.05	1.83	9	5		21/2	60032						8
39966   1.15   .65   .99   5   2   .60038   1.35   .93   19   3   .39371   1.65   .99   9   5   2   .60042   1.75   1.05   19   5   .39372   1.85   .44   .49   .44   .49   .45					5		2	60034	1.55	.93	19	5		8
1997    1.80	39966	1.15	.69	9	5		2					5		10
19974					5		2	60040	1.75	1.05	19	5		10
39975 16.00 9.60 13 1 6 8 60046 1.90 1.14 19 5 1 39978 2.20 1.20 1.64 9 5 5 1 60048 1.90 1.14 19 5 1 39978 2.20 1.00 1.00 6.0 9 5 27 6 60048 1.90 1.14 19 5 1 39978 2.20 1.00 1.00 6.0 9 5 27 6 60048 1.90 1.14 19 5 1 39979 1.00 1.00 6.0 9 5 27 6 60048 1.90 1.14 19 5 1 39979 1.00 1.00 6.0 9 5 27 6 60048 1.90 1.32 19 5 1 1 60048 1.90 1.90 1.90 1.90 1.90 1.90 1.90 1.90	39974	.80	.48	9-20	5		3		1.75					13
19977   2.70			9.60		1	6	8	60046	1.90	1.14	19			15
19978   2.00	39977	2.70	1.62	8	5		13					5		4
1.50				9	5		21/2	60052	2.20	1.32	19	5	1	4
1-89   1-89	39981	3.20	1.92		5		15					5		6
39984   3.20   1.92   8   5   6   60064   3.75   2.25   19   5   1   39985   3.60   3.66   8   5   7   60134   2.30   1.38   19   5   1   39997   8.00   4.80   8   5   7   60134   2.30   1.38   19   5   1   39997   8.00   4.80   8   5   7   7   60134   2.30   1.38   19   5   1   39997   8.00   4.80   8   5   7   7   60134   2.30   1.38   19   5   1   40114   8.00   4.80   8   8   5   2   60152   2.30   1.38   19   5   1   40114   8.00   4.80   8   18   5   2   60152   2.30   2.30   1.38   19   5   1   40114   8.00   4.80   8   18   5   2   60152   2.30					5		3	60058	3.00	1.80	19	5	1	В
39985   4.00   2.40   8   5   1   3   60128   2.20   1.32   19   5   5   39997   2.00   1.20   8   5   7   60134   2.30   1.38   19   5   1   60146   2.20   1.32   19   5   1   60146   2.20   1.32   19   5   1   60146   2.20   1.32   19   5   1   60146   2.20   1.32   19   5   1   60146   2.20   1.38   19   5   1   60146   2.20   1.38   19   5   1   60146   2.20   1.38   19   5   1   60146   2.20   1.38   19   5   1   60146   2.20   1.38   19   5   1   60146   2.20   1.32   19   5   1   60146   2.20   1.32   19   5   1   60146   2.20   1.32   19   5   1   60146   2.20   1.32   19   5   1   60146   2.20   1.32   19   5   1   60146   2.20   1.32   19   5   1   60146   2.20   1.32   19   5   1   60146   2.20   1.32   19   5   1   60146   2.20   1.32   19   5   1   60146   2.20   1.32   19   5   1   60146   2.20   1.32   19   5   1   60146   2.20   1.20   2.20   2.20   1.20   2.20   2.20   1.20   2.20   2.20   1.20   2.20   2.20   1.20   2.20   2.20   1.20   2.20   2.20   1.20   2.20   2.20   1.20   2.20   2.20   1.20   2.20   2.20   1.20   2.20   2.20   1.20   2.20   2.20   1.20   2.20   2.20   1.20   2.20	39984	3.20	1,92		5		6							9 14
39990			2.40		5	1	3	60128	2.20	1.32	19	5		9
39997 8.00 4.80 8 5 13 60136 2.30 1.38 19 5 1 40112 8.0 4.8 18 5 2 60152 4.95 2.97 19 5 1 40112 8.0 4.8 18 5 2 60152 4.95 2.97 19 5 1 40114 8.0 4.8 18 5 2 60152 4.95 2.97 19 5 1 40114 8.0 4.8 18 5 2 60152 4.95 2.97 19 5 1 40114 8.0 4.8 18 5 2 60152 4.95 2.97 19 5 2 4 40118 8.0 4.8 18 5 2 60152 4.95 2.97 19 5 2 4 40118 8.0 4.8 18 5 2 60152 4.95 2.97 19 5 2 4 40112 8.0 4.8 18 5 2 60998 8.0 1.00 6.0 14 5 1 40120 8.0 4.8 18 5 2 60998 1.00 6.0 14 5 1 40121 8.0 4.8 18 5 2 60999 1.00 6.0 14 5 1 40122 8.0 4.8 18 5 2 60999 1.00 6.0 14 5 1 40121 8.0 4.8 18 5 2 60999 1.00 6.0 14 5 1 40122 8.0 4.8 18 5 2 60999 1.00 6.0 14 5 1 40122 8.0 4.8 18 5 2 60999 1.00 6.0 14 5 1 40122 8.0 4.8 18 5 2 60999 1.00 6.0 14 5 1 40122 8.0 4.8 18 5 2 60999 1.00 6.0 14 5 1 40122 8.0 4.8 18 5 2 60999 1.00 6.0 14 5 1 40122 8.0 4.8 18 5 2 60999 1.00 6.0 14 5 1 40122 8.0 4.8 18 5 2 60999 1.00 6.0 14 5 1 40122 8.0 4.0 14 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	39990	2.00	1.20	8	5				2.20		19	5	1	14
40112					5		13	60136	2.30	1.38	19	5	1	2
40114	40112	.80	.48	18	5	1	2					5		4 7
40118					5		2	60152	4.95	2.97	19	5	2	2
40122	40118	.80	.48	18	5		2						1	4
40122	40119						2	69990	2.90	1.74	20	5	1	6
40124 9.5 .57 18 5 2 69994 3.800 2.28 17 5 5 4 40125 9.5 .57 18 5 4 69995 1.50 .90 15 5 5 4 60128 9.5 .57 18 5 5 4 69996 1.50 .90 15 5 5 4 60128 9.5 .57 18 5 5 4 69996 1.50 .90 15 5 5 3 60121 1.20 .72 18 5 5 5 69997 7.15 4.29 15 5 3 40130 1.20 .72 18 5 5 69999 7.15 4.29 15 5 3 40131 1.20 .72 18 5 5 6 69998 7.15 4.29 15 5 3 40131 1.20 .72 18 5 6 69998 7.15 4.29 10.35 6.21 14 5 3 40132 1.20 .72 18 5 6 79998 10.35 6.21 14 5 3 40132 1.20 .72 18 5 6 79998 10.35 6.21 14 19 1 1 40140 1.70 1.02 18 5 8 8 80034 1.90 1.14 19 1 1 1 40199 .85 .51 33 5 2 80040 2.00 1.20 19 1 1 40199 .85 .51 33 5 2 80040 2.00 1.20 19 1 1 401199 .85 .51 5 18 5 2 80044 2.00 1.20 19 1 1 401199 .85 .51 5 18 5 2 80044 2.00 1.20 19 1 1 40119 .75 .45 18 5 5 2 80044 2.00 1.20 19 1 1 40119 .75 .45 18 5 5 2 80044 2.00 1.20 19 1 1 40119 .75 .45 18 5 5 2 80044 2.00 1.20 19 1 1 40119 .75 .45 18 5 5 3 80048 2.25 1.35 19 1 1 40210 .75 .45 18 5 5 3 80048 2.25 1.35 19 1 1 40210 .75 .45 18 5 5 3 80048 2.25 1.35 19 1 1 40210 .75 .45 18 5 5 3 80048 2.25 1.56 19 1 1 40210 .75 .45 18 5 5 3 80048 2.25 1.56 19 1 1 40210 .75 .45 18 5 5 3 80048 2.25 1.56 19 1 1 40210 .75 .45 18 5 5 3 80048 2.25 1.56 19 1 1 40210 .75 .45 18 5 5 3 80048 2.25 1.56 19 1 1 40210 .75 .45 18 5 5 3 80048 2.25 1.56 19 1 1 40210 .75 .45 18 5 5 8 80053 3.55 2.10 19 1 2 40224 .90 .48 18 5 6 80053 3.55 2.10 19 1 2 40224 .90 .48 18 5 6 80053 3.55 2.10 19 1 2 40224 .90 .48 18 5 6 80053 3.55 2.10 19 1 2 40224 .90 .48 18 5 6 80053 3.55 2.10 19 1 2 40224 .90 .48 18 5 6 80053 3.55 2.10 19 1 1 4 40224 .10 .96 .96 18 5 9 80070 6.20 3.60 19 1 4 40224 .10 .96 .96 18 5 9 80070 6.20 3.60 19 1 4 40224 .10 .96 .96 18 5 9 80070 6.20 3.60 19 1 4 40224 .10 .96 .96 19 5 6 80085 3.55 2.10 19 1 7 4 40332 1.60 .96 19 5 5 6 80085 3.55 2.10 19 1 7 4 40332 1.60 .96 19 5 7 80084 1.50 .00 19 1 1 4 40224 1.60 .96 19 5 7 80084 1.50 .00 19 1 1 4 40224 1.60 .96 19 5 7 80084 1.50 .00 19 1 1 4 40224 1.60 .96 19 5 7 80084 1.50 .00 19 1 1 1 4 40224 1.60 .96 19 5 7 80084 1.50 .00 19 1 1 1 4 40224 1.60 .96 19 5 7 80084 1.50 .00 19 1	40121	.80	.48	18	5		2	69992				5		4
40125			.48	18	5		2	69993	6.25	3.75	20	5	1	5
49126	40125	.95	.57	18	5		3	69995					/1	12
40130 1.20 7.2 18 5 5 69998 71.5 4.29 11 5 3 3 40132 1.20 7.72 18 5 5 69998 71.5 4.29 11 5 3 3 40132 1.20 7.72 18 5 5 6 69998 71.5 4.29 11 5 3 3 40132 1.20 7.72 18 5 5 6 69998 71.5 6.21 14 5 3 3 40132 1.20 7.72 18 5 5 6 69998 71.5 6.21 14 5 3 3 40132 1.20 7.72 18 5 5 6 69998 71.5 6.21 14 5 3 3 40132 1.20 7.72 18 5 5 6 69998 71.5 6.21 14 5 3 3 40132 1.20 7.72 18 5 5 6 69998 71.5 6.21 14 5 5 3 40136 1.50 1.50 29 5 1 40136 1.50 1.50 29 5 1 40136 1.50 1.50 1.50 29 5 1 40136 1.50 1.50 1.50 1.50 1.50 1.50 1.50 1.50	40126	.95	.57	18	5		4	69996	1.50	.90	15	5	2	11
40131 1.20 .72 18 5 5 6 69999 10.35 6.21 14 5 3 3 40134 1.50 .90 18 5 7 79998 2.00 1.20 20 5 1 40136 1.60 .96 18 5 7 79999 2.00 1.20 20 5 1 40140 1.70 1.02 18 5 8 80034 1.90 1.14 19 1 1 40190 1.75 4.5 18 5 2 80040 2.00 1.20 19 1 1 1 40210 .75 4.5 18 5 2 80044 2.00 1.20 19 1 1 40214 .75 4.5 18 5 2 80044 2.00 1.20 19 1 1 40214 .75 4.5 18 5 2 80044 2.00 1.20 19 1 1 40214 .75 4.5 18 5 2 80044 2.00 1.20 19 1 1 40214 .75 4.5 18 5 2 80044 2.00 1.20 19 1 1 40214 .75 4.5 18 5 3 80050 2.50 1.55 19 1 1 40218 .75 4.5 18 5 3 80050 2.50 1.55 19 1 1 40218 .75 4.5 18 5 3 80050 2.50 1.55 19 1 1 40218 .75 4.5 18 5 5 80054 3.50 2.50 1.74 19 1 2 40220 .75 4.5 18 5 5 80054 3.25 1.95 19 1 2 40220 .75 4.5 18 5 5 80054 3.25 1.95 19 1 2 40220 .75 4.5 18 5 5 80054 3.25 1.95 19 1 2 40222 .80 4.8 18 5 5 6 80052 2.90 1.74 19 1 2 40224 .90 .54 18 5 6 80056 3.50 2.10 19 1 2 2 40224 .90 .54 18 5 6 80056 3.50 2.10 19 1 2 2 40224 .90 .54 18 5 6 80056 3.50 2.10 19 1 2 2 40225 .90 .54 18 5 7 80064 4.50 2.70 19 1 3 40220 1.14 0.84 18 5 8 80066 4.25 2.55 19 1 3 40220 1.14 0.84 18 5 8 80066 4.50 2.70 19 1 3 40224 1.60 .96 18 5 9 80070 6.25 3.75 19 1 4 40224 1.60 .96 18 5 9 80070 6.25 3.75 19 1 4 40224 1.60 .96 19 5 6 80088 6.00 3.60 19 1 4 40234 1.60 .96 19 5 6 80086 6.00 3.60 19 1 4 40234 1.60 .96 19 5 7 80084 10.75 4.65 19 1 7 40332 1.60 .96 19 5 7 80088 12.25 7.35 19 1 7 40332 1.60 .96 19 5 7 80088 12.25 7.35 19 1 7 40332 1.60 .96 19 5 7 80088 12.25 7.35 19 1 7 7 80081 1.50 .90 19 1 7 7 80081 1.50 .90 19 1 7 7 80081 1.50 .90 19 1 7 7 80081 1.50 .90 19 1 7 7 80081 1.50 .90 19 1 7 7 80081 1.50 .90 19 1 7 7 80081 1.50 .90 19 1 7 7 80081 1.50 .90 19 1 7 7 80081 1.50 .90 19 1 1 4 80091 1.50 .90 19 1 7 7 80081 1.50 .90 19 1 7 7 80081 1.50 .90 19 1 7 7 80081 1.50 .90 19 1 7 7 80081 1.50 .90 19 1 7 7 80081 1.50 .90 19 1 7 7 80081 1.50 .90 19 1 7 7 80081 1.50 .90 19 1 7 7 80081 1.50 .90 19 1 7 7 80081 1.50 .90 19 1 7 7 80081 1.50 .90 19 1 7 7 80081 1.50 .90 19 1 1 1 80091 1.50 .90 19 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	40130	1.20	.72	18	5		5		3.75	2,25		5	3	5 15
40134 1.50 .90 18 5 7 79999 2.50 1.50 20 5 1 1 4 40136 1.60 .96 18 5 8 8 80034 1.90 1.14 19 1 1 1 4 40199 .85 .51 33 5 2 80040 2.00 1.20 19 1 1 1 4 40199 .85 .51 33 5 2 80040 2.00 1.20 19 1 1 1 4 40210 .75 .45 18 5 2 80042 2.00 1.20 19 1 1 1 4 40214 .75 .45 18 5 2 80044 2.00 1.20 19 1 1 1 4 40214 .75 .45 18 5 2 80044 2.00 1.20 19 1 1 1 4 40214 .75 .45 18 5 3 80044 2.00 1.20 19 1 1 1 4 40216 .75 .45 18 5 3 80044 2.00 1.20 19 1 1 1 4 40216 .75 .45 18 5 3 80048 2.50 1.56 19 1 1 1 4 40216 .75 .45 18 5 3 80048 2.50 1.56 19 1 1 1 4 40216 .75 .45 18 5 3 80052 2.50 1.56 19 1 1 1 4 40216 .75 .45 18 5 5 8 80052 2.90 1.54 19 1 1 2 4 40220 .75 .45 18 5 5 8 80052 2.90 1.54 19 1 1 2 4 40224 .90 .54 18 5 6 80053 3.50 2.50 1.55 19 1 2 4 40224 .90 .54 18 5 6 80056 3.50 2.19 1 9 1 2 4 40224 .90 .54 18 5 6 80056 3.50 2.19 19 1 2 4 40226 1.05 .63 18 5 7 80060 4.25 2.55 19 1 3 4 40230 1.40 .84 18 5 8 80066 4.25 2.55 19 1 3 4 40230 1.40 .84 18 5 8 80066 4.55 2.55 19 1 3 4 40234 1.60 .96 18 5 7 80062 4.50 2.70 19 1 3 4 40234 1.60 .96 18 5 7 80062 4.50 2.70 19 1 3 4 40234 1.60 .96 18 5 7 80062 4.50 2.70 19 1 4 4 40316 1.45 .87 19 5 5 8 80074 6.25 3.75 19 1 4 4 40316 1.45 .87 19 5 5 8 80074 6.25 3.75 19 1 4 4 40316 1.45 .87 19 5 5 8 80074 6.25 3.75 19 1 4 4 40324 1.60 .96 19 5 5 8 80068 6.00 3.60 19 1 4 4 40316 1.45 .87 19 5 5 8 80066 4.75 5.55 19 1 6 6 80082 1.75 1.05 18 5 11 1 8 5 10 80074 7.00 4.20 19 1 4 40312 1.60 .96 19 5 7 80084 10.75 6.45 19 1 7 8 80094 10.75 6.45 19	40131	1.20	.72	18			5	69999	10.35	6.21	14	5		5
40136 1.60 96 18 5 8 8 80034 1.90 1.1.14 19 1 1 1 40199 .85 .51 33 5 2 80046 2.00 1.20 19 1 1 1 40199 .85 .51 33 5 2 80040 2.00 1.20 19 1 1 1 40212 .75 .45 18 5 2 80042 2.00 1.20 19 1 1 1 40212 .75 .45 18 5 2 80044 2.00 1.20 19 1 1 1 40216 .75 .45 18 5 2 80044 2.00 1.20 19 1 1 1 40216 .75 .45 18 5 2 80044 2.00 1.20 19 1 1 1 40216 .75 .45 18 5 3 80048 2.50 1.56 19 1 1 40218 .75 .45 18 5 3 80048 2.50 1.56 19 1 1 40219 .75 .45 18 5 3 80048 2.50 1.56 19 1 1 40219 .75 .45 18 5 3 80048 2.50 1.56 19 1 1 40219 .75 .45 18 5 5 8 80052 2.90 1.74 19 1 40222 .80 .45 18 5 5 6 80053 3.50 2.10 19 1 2 40224 .90 .54 18 5 6 80058 3.75 2.25 19 1 2 40224 .90 .54 18 5 7 80060 4.25 2.55 19 1 2 40224 .90 .54 18 5 7 80060 4.25 2.55 19 1 3 40228 1.05 .63 18 5 7 80060 4.25 2.55 19 1 3 40230 1.40 .84 18 5 8 80066 5.50 3.30 19 1 4 40234 1.60 .96 18 5 7 80066 4.75 2.85 19 1 3 40234 1.60 .96 18 5 9 80070 6.25 3.75 19 1 40234 1.60 .96 18 5 9 80070 6.25 3.75 19 1 40234 1.60 .96 18 5 9 80070 6.25 3.75 19 1 40234 1.60 .96 18 5 9 80070 6.25 3.75 19 1 40236 1.75 1.05 18 5 10 80072 6.50 3.90 19 1 4 40234 1.60 .96 18 5 9 80070 6.25 3.75 19 1 40236 1.75 1.05 18 5 10 80072 6.50 3.90 19 1 4 40236 1.75 1.05 18 5 10 80072 6.50 3.90 19 1 4 40336 1.75 1.05 18 5 10 80072 6.55 3.75 19 1 40318 1.45 .87 19 5 4 80076 7.75 4.65 19 1 7 40332 1.60 .96 19 5 7 80088 1.50 5.10 19 1 6 60322 1.60 .96 19 5 7 80088 1.50 5.10 19 1 7 7 80098 1.50 6.90 19 1 7 8	40134	1.50	.90	18	5		7			1.20		5		10 8
1.02	40136	1.60	.96	- 18	5		8	80034	1.90	1.14	19	1	1	- 4
40210	40199	.85	.51	33					1.90	1.14	19	1	1	6
40218         .75         .45         18         5         3         80050         2.60         1.56         19         1           40219         .75         .45         18         5         5         80054         3.25         1.95         19         1         2           40224         .90         .54         18         5         6         80056         3.50         2.10         19         1         2           40225         .90         .54         18         5         6         80056         3.50         2.10         19         1         2           40225         .90         .54         18         5         7         80060         4.25         2.55         19         1         2           40228         1.15         .69         18         5         7         80060         4.75         2.85         19         1         3           40230         1.40         .84         18         5         8         80068         6.00         3.60         19         1         4           40230         1.85         1.01         18         5         9         80072         6.50         3	40210	.75	.45	18	5		2	80042	2.00	1.20	19	i	1	8
40218         .75         .45         18         5         3         80050         2.60         1.56         19         1           40219         .75         .45         18         5         4         80052         2.90         1.74         19         1         2           40224         .90         .48         18         5         6         80056         3.50         2.10         19         1         2           40225         .90         .54         18         5         6         80056         3.50         2.10         19         1         2           40225         .90         .54         18         5         7         80060         4.25         2.55         19         1         2           40224         1.05         .69         18         5         7         80060         4.25         2.55         19         1         3           40228         1.15         .69         18         5         7         80064         4.75         2.85         19         1         3           40230         1.46         .84         18         5         8         80068         6.00         3.	40214	.75	.45	18	5		2			1.20	19			8
40218         .75         .45         18         5         3         80050         2.60         1.56         19         1           40219         .75         .45         18         5         5         80054         3.25         1.95         19         1         2           40224         .90         .54         18         5         6         80056         3.50         2.10         19         1         2           40225         .90         .54         18         5         6         80058         3.50         2.10         19         1         2           40225         .90         .54         18         5         7         80060         4.25         2.55         19         1         3           40225         1.05         .63         18         5         7         80060         4.25         2.55         19         1         3           40228         1.15         .69         18         5         7         80064         4.75         2.85         19         1         3           40230         1.60         .96         18         5         9         80070         6.25         3.	40216	.75	.45	18			3	80048	2.60	1.56	19	1	1	12
40220	40219	.75	.45	18			4	80050	2.60	1.56	19	1		
40224	40220	.75	.45	18	5		5	80054	3.25	1.95	19	1		14
40225	40224	.90						B0056	3.50	2.10	19	1	2	6
40226         1.05         .63         18         5         7         80062         4.50         2.70         19         1         3           40228         1.140         .84         18         5         7         80064         4.75         2.85         19         1         3           40232         1.40         .84         18         5         8         80066         5.50         3.30         19         1         4           40234         1.60         .96         18         5         9         80070         6.25         3.75         19         1         4           40236         1.75         1.05         18         5         10         80072         6.50         3.90         19         1         4           40316         1.45         .87         19         5         5         4         80076         7.75         4.65         19         1         4           40318         1.45         .87         19         5         5         80080         9.25         5.55         19         1         6           40322         1.60         .96         19         5         7         8	40225	.90	.54	18	5		7	80060	4.25	2.55	19	1	3	8
40230 1.40 .84 18 5 8 80066 5.50 3.30 19 1 4 40232 1.40 .84 18 5 8 80068 6.00 3.60 19 1 4 40234 1.60 .96 18 5 9 80070 6.25 3.75 19 1 4 40240 1.85 1.11 18 5 11 80074 7.00 4.20 19 1 4 40316 1.45 .87 19 5 4 80076 7.75 4.65 19 1 4 40318 1.45 .87 19 5 5 80078 8.50 5.10 19 1 6 40320 1.60 .96 19 5 5 5 80080 9.25 5.55 19 1 6 40322 1.60 .96 19 5 5 5 80080 9.25 5.55 19 1 6 40322 1.60 .96 19 5 7 80084 10.00 6.00 19 1 6 40322 1.60 .96 19 5 7 80084 10.05 6.45 19 1 6 40322 1.60 .96 19 5 7 80088 12.25 7.35 19 1 7 40330 1.75 1.05 19 5 7 80088 12.25 7.35 19 1 7 40332 1.75 1.05 19 5 8 80092 13.00 7.80 19 1 7 40332 1.75 1.05 19 5 8 80092 13.07 7.80 19 1 7 40332 1.75 1.05 19 5 8 80090 13.00 7.80 19 1 7 40333 1.95 1.17 19 5 9 80094 14.50 8,70 19 1 9 49974 8.0 48 9-20 5 3 80096 15.25 9.15 19 1 9 49975 16.00 9.60 13 1 6 8 80098 15.25 9.15 19 1 10 49978 2.60 1.56 20 5 6 80112 30.00 18.00 19 1 10 49978 2.60 1.56 20 5 6 80112 30.00 18.00 19 1 10 49978 2.60 1.56 20 5 6 80112 30.00 18.00 19 1 10 49981 2.60 1.56 15 5 1 2 81036 2.30 1.38 19 1 1 49980 3.60 2.16 20 10 5 81036 2.30 1.38 19 1 1 49981 2.60 1.56 15 5 1 2 81036 2.30 1.38 19 1 2 49982 3.25 1.95 15 7 1 8999  3.20 1.90 1.91 1 4 49995 5.50 3.50 14 5 1 89999 2.50 1.50 20 1 1 49999 2.60 1.56 16 5 1 14 89995 6.50 3.90 17 1 6 49999 2.60 1.56 16 5 2 4 89997 2.70 1.62 17 1 6 49995 5.50 3.50 1.56 16 5 2 4 89997 2.70 1.62 17 1 6 49995 5.50 3.50 1.56 16 5 2 4 89997 2.70 1.62 17 1 6 49995 5.50 3.50 1.56 16 5 2 4 89997 2.70 1.62 17 1 6 49995 5.50 3.50 1.56 16 5 2 4 89997 2.70 1.62 17 1 6 49995 5.50 3.50 1.56 16 5 2 4 89997 2.70 1.62 17 1 6 49995 5.50 3.50 1.56 16 5 2 4 89997 2.70 1.62 17 1 6 49995 5.50 3.50 1.56 16 5 2 4 89997 2.70 1.62 17 1 6 49995 5.50 3.50 1.56 16 5 2 4 89997 2.70 1.62 17 1 6 49995 5.50 3.50 1.56 16 5 2 4 89997 2.70 1.62 17 1 6 49995 5.50 3.50 1.56 16 5 2 4 89997 2.70 1.62 17 1 6 49995 5.50 3.50 1.56 16 5 2 4 89997 2.70 1.62 17 1 6 49995 5.50 3.50 1.56 16 5 2 4 89997 2.70 1.62 17 1 6	40228	1.15			5		7		4.50	2.70	19	1	3	6
40232	40230	1.40	.84	18	5		8	80066	5.50	3.30	19	1	4	2
40236 1.75 1.05 18 5 10 80072 6.50 3.90 19 1 4 4 40316 1.45 .87 19 5 4 80076 7.75 4.65 19 1 4 4 40316 1.45 .87 19 5 5 5 800876 7.75 4.65 19 1 4 4 40318 1.45 .87 19 5 5 5 80080 9.25 5.55 19 1 6 40322 1.60 .96 19 5 5 5 80080 9.25 5.55 19 1 6 40322 1.60 .96 19 5 6 80082 10.00 6.00 19 1 6 40322 1.60 .96 19 5 6 80082 10.00 6.00 19 1 6 40322 1.60 .96 19 5 7 80084 10.75 6.45 19 1 6 40322 1.60 .96 19 5 7 80086 11.50 6.90 19 1 7 40328 1.60 .96 19 5 7 80086 11.50 6.90 19 1 7 40332 1.75 1.05 19 5 8 80092 13.75 8.25 19 1 7 40332 1.75 1.05 19 5 8 80092 13.75 8.25 19 1 7 40335 1.95 1.17 19 5 8 80092 13.75 8.25 19 1 7 40335 1.95 1.17 19 5 9 80094 14.50 8.70 19 1 9 49974 8.0 .48 9-20 5 3 80096 15.25 9.15 19 1 9 49975 16.00 9.60 13 1 6 8 80098 15.25 9.15 19 1 10 49978 2.60 1.56 20 5 6 80112 30.00 7.80 19 1 10 49978 2.60 1.56 20 5 6 80112 30.00 16.75 10.05 19 1 10 49978 2.60 1.56 20 5 6 80112 30.00 16.75 10.05 19 1 10 49982 1.90 1.14 15 5 1 8 80104 3.30 1.98 19 1 2 49981 2.60 1.56 15 5 1 2 81038 2.75 1.65 19 1 2 49984 3.25 1.95 1.7 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	40234	1.60	.96	18	5				6.00	3.60	19	1	4	أثر
40240 1.85 1.11 18 5 11 80074 7.00 4.20 19 1 4 40316 1.45 .87 19 5 4 80076 7.75 4.65 19 1 4 40318 1.45 .87 19 5 5 5 80080 9.25 5.55 19 1 6 40322 1.60 .96 19 5 5 6 80080 9.25 5.55 19 1 6 40322 1.60 .96 19 5 7 80084 10.75 6.45 19 1 6 40323 1.60 .96 19 5 7 80084 10.75 6.45 19 1 6 40326 1.60 .96 19 5 7 80084 10.75 6.45 19 1 6 40328 1.60 .96 19 5 7 80088 12.25 7.35 19 1 7 40332 1.75 1.05 19 5 7 80088 12.25 7.35 19 1 7 40332 1.75 1.05 19 5 8 80092 13.75 8.25 19 1 7 40333 1.75 1.05 19 5 8 80092 13.75 8.25 19 1 7 40333 1.75 1.05 19 5 8 80092 13.75 8.25 19 1 7 40335 1.95 1.17 19 5 9 80094 13.75 8.25 19 1 7 40336 1.95 1.17 19 5 9 80094 13.75 8.25 19 1 7 40977 3.00 1.80 48 9-20 5 3 80098 15.25 9.15 19 1 9 49977 3.00 1.80 14 5 1 8 80098 15.25 9.15 19 1 9 49979 1.00 .60 20 5 6 80112 30.00 16.75 10.05 19 1 10 49979 1.00 .60 20 5 3 81034 2.30 1.38 19 1 1 49980 3.60 2.16 20 10 5 81036 2.30 1.38 19 1 1 49981 2.60 1.56 15 5 1 2 81038 2.75 1.65 19 1 2 49982 1.90 1.14 15 5 1 81044 4.40 2.64 19 1 2 49984 3.25 1.95 1.5 7 1 81044 4.40 2.64 19 1 2 49985 3.60 2.16 15 5 1 2 81050 6.15 3.69 19 1 3 49987 2.50 1.50 17 5 1 81044 4.40 2.64 19 1 2 49988 4.30 2.58 15 5 7 1 89997 1.20 .72 17 5 1 81044 4.40 2.64 19 1 2 49988 4.30 2.58 15 5 7 1 89998 2.50 1.50 17 5 1 89999 2.50 1.50 20 1 1 49999 2.00 1.56 16 5 1 14 81044 4.40 2.64 19 1 2 49989 1.20 .72 17 5 1 81046 8.30 4.98 19 1 4 49989 2.00 1.56 16 5 2 4 89997 2.50 1.50 20 1 1 49999 2.00 1.56 16 5 2 4 89999 2.50 1.50 20 1 1 49990 2.00 1.56 16 5 2 4 89999 5.50 3.90 17 1 6 49995 5.00 3.00 16 5 2 4 89997 2.70 1.62 17 1 6 49995 5.00 3.00 14 5 1 2 89999 3.20 1.92 17 1 1 6 49995 5.00 3.00 14 5 1 2 89999 3.20 1.92 17 1 1 6 49995 5.00 3.00 14 5 1 2 89999 3.20 1.92 17 1 1 6 49995 5.00 3.00 14 5 1 2 89999 3.20 1.92 17 1 1 1	40236	1.75	1.05	18	5		10	80072	6.50	3.90	19	1		8
40318 1.45 .87 19 5 5 80080 7.73 1.05 19 1 6 40320 1.60 .96 19 5 5 6 80080 9.25 5.55 19 1 6 40322 1.60 .96 19 5 7 80084 10.75 6.45 19 1 6 40323 1.60 .96 19 5 7 80084 10.75 6.45 19 1 6 40328 1.60 .96 19 5 7 80088 12.25 7.35 19 1 7 40332 1.75 1.05 19 5 7 80088 12.25 7.35 19 1 7 40332 1.75 1.05 19 5 8 80090 13.00 7.80 19 1 7 40333 1.75 1.05 19 5 8 80090 13.00 7.80 19 1 7 40333 1.75 1.05 19 5 8 80092 13.75 8.25 19 1 7 40335 1.95 1.17 19 5 9 80094 13.75 8.25 19 1 7 40336 1.95 1.17 19 5 9 80094 13.75 8.25 19 1 7 49977 3.00 1.80 48 9-20 5 3 80096 15.25 9.15 19 1 9 49977 3.00 1.80 14 5 1 8 80100 16.75 10.05 19 1 10 49978 2.60 1.56 20 5 6 80112 30.00 18.00 19 1 10 49979 1.00 .60 20 5 3 81034 2.30 1.38 19 1 1 49980 3.60 2.16 20 10 5 81036 2.30 1.38 19 1 1 49981 2.60 1.56 15 5 1 2 81038 2.75 1.65 19 1 2 49982 1.90 1.14 15 5 1 81040 3.30 1.98 19 1 2 49984 3.25 1.95 15 7 1 81044 4.40 2.64 19 1 2 49985 2.05 1.50 17 5 1 81044 4.40 2.64 19 1 2 49987 2.50 1.50 17 5 1 81044 4.40 2.64 19 1 2 49988 4.30 2.58 15 5 7 1 81044 4.40 2.64 19 1 2 49989 1.20 .72 17 5 1 81046 8.30 4.98 19 1 4 49989 2.00 1.150 17 5 1 81050 6.15 3.69 19 1 3 49990 2.00 1.56 16 5 2 4 89997 2.50 1.50 20 1 1 49991 1.25 .75 20 5 8 89994 1.20 .72 14 1 49990 2.00 1.56 16 5 2 4 89997 2.50 1.50 17 1 6 49993 5.00 3.00 1.65 5 2 4 89997 2.70 1.62 17 1 6 49995 5.00 3.00 1.56 16 5 2 4 89997 2.70 1.62 17 1 6 49995 5.00 3.00 1.56 16 5 2 4 89997 2.70 1.62 17 1 6 49995 5.00 3.00 1.56 16 5 2 4 89997 2.70 1.62 17 1 6 49995 5.00 3.00 1.56 16 5 2 4 89997 2.70 1.62 17 1 6 49995 5.00 3.00 1.56 16 5 2 4 89997 2.70 1.62 17 1 6 49995 5.00 3.00 1.56 16 5 2 4 89997 2.70 1.62 17 1 6 49995 5.00 3.00 1.56 16 5 2 4 89997 2.70 1.62 17 1 6 49995 5.00 3.00 1.56 16 5 2 4 89997 2.70 1.62 17 1 6 49995 5.00 3.00 1.56 16 5 2 4 89997 2.70 1.62 17 1 6 49995 5.00 3.00 1.56 16 5 2 4 89997 2.70 1.62 17 1 6 49995 5.00 3.00 1.56 16 5 2 4 89997 2.70 1.62 17 1 6 49995 6.00 3.60 14 5 1 2 89998 3.20 1.92 17 1 1 6	40316							80074	7.00	4.20	19	1	4	6
40322 1.60 .96 19 5 6 80082 10.00 6.00 19 1 6 40324 1.60 .96 19 5 6 80084 10.75 6.45 19 1 6 40325 1.60 .96 19 5 7 80086 11.50 6.00 19 1 6 40326 1.60 .96 19 5 7 80086 11.50 6.90 19 1 7 40328 1.60 .96 19 5 7 80088 12.25 7.35 19 1 7 40330 1.75 1.05 19 5 7 80088 12.25 7.35 19 1 7 40332 1.75 1.05 19 5 8 80090 13.00 7.80 19 1 7 40333 1.95 1.17 19 5 9 80090 13.00 7.80 19 1 7 40335 1.95 1.17 19 5 9 80090 13.75 8.25 19 1 7 49974 .80 .48 9-20 5 3 80096 15.25 9.15 19 1 9 49975 16.00 9.60 13 1 6 8 80098 16.00 9.60 19 1 10 49978 2.60 1.56 20 5 6 80100 16.75 10.05 19 1 10 49979 1.00 .50 20 5 6 80112 30.00 18.00 19 1 10 49979 1.00 .50 20 5 3 81036 2.30 1.38 19 1 1 49980 3.60 2.16 20 10 5 81036 2.30 1.38 19 1 1 49981 2.60 1.56 15 5 1 2 81038 2.75 1.65 19 1 2 49982 1.90 1.14 15 5 1 81040 3.30 1.98 19 1 2 49983 2.15 1.29 17 5 14 81040 4.40 2.64 19 1 2 49984 3.25 1.95 15 7 1 81046 5.75 3.45 19 1 2 49985 3.60 2.16 15 5 1 2 81050 6.15 3.69 19 1 3 49987 2.50 1.50 17 5 1 2 81050 6.15 3.69 19 1 3 49987 2.50 1.50 17 5 1 2 81058 7.00 4.20 19 1 4 49988 4.30 2.58 15 5 2 2 81058 7.00 4.20 19 1 4 49989 1.20 .72 17 5 4 80992 2.50 1.50 20 1 1 49990 2.00 1.20 17 5 1 80999 2.50 1.50 20 1 1 49991 1.25 .75 20 5 8 89994 2.60 1.56 16 5 2 4 80997 2.70 1.62 17 1 6 49995 5.00 3.00 16 5 2 4 80997 2.70 1.62 17 1 6 49995 5.00 3.00 1.56 16 5 2 4 80997 2.70 1.62 17 1 6 49995 5.00 3.00 1.56 16 5 2 4 80997 2.70 1.62 17 1 6 49995 5.00 3.00 1.56 16 5 2 4 80997 2.70 1.62 17 1 6 49995 5.00 3.00 1.56 16 5 2 4 80997 2.70 1.62 17 1 6 49995 5.00 3.00 1.56 16 5 2 4 80999 3.20 1.92 17 1 1 49996 6.00 3.60 14 5 1 2 80999 3.20 1.92 17 1 1	40318	1.45	.87	19	5		5	80078	8.50	5.10	19	1		8
40324 1.60 .96 19 5 7 80084 10.75 6.45 19 1 6 40326 1.60 .96 19 5 7 80088 12.55 6.90 19 1 7 40328 1.60 .96 19 5 7 80088 12.25 7.35 19 1 7 40332 1.75 1.05 19 5 8 80090 13.00 7.80 19 1 7 40332 1.75 1.05 19 5 8 80092 13.75 8.25 19 1 7 40332 1.75 1.05 19 5 8 80092 13.75 8.25 19 1 7 40336 1.95 1.17 19 5 9 80094 14.50 8.70 19 1 9 49975 16.00 9.60 13 1 6 8 80098 16.00 9.60 19 1 10 49978 2.60 1.56 20 5 6 80112 30.00 18.00 19 1 10 49978 2.60 1.56 20 5 6 80112 30.00 18.00 19 1 10 49978 1.00 .60 20 5 3 81034 2.30 1.38 19 1 1 49980 3.60 2.16 20 10 5 81036 2.30 1.38 19 1 1 49980 3.60 2.16 20 10 5 81036 2.30 1.38 19 1 1 49981 2.60 1.56 15 5 1 2 81038 2.75 1.65 19 1 2 49983 2.15 1.29 17 5 14 81044 4.40 2.64 19 1 2 49981 3.25 1.95 15 7 1 81046 5.75 3.45 19 1 2 49985 3.60 2.16 15 5 1 2 81038 2.75 1.65 19 1 2 49985 3.60 2.16 15 5 1 2 81038 2.75 1.65 19 1 2 49985 3.60 2.16 15 5 1 2 81036 2.30 1.38 19 1 1 49986 .60 3.60 2.16 15 5 1 2 81050 6.15 3.69 19 1 3 49987 2.50 1.50 17 5 1 81046 5.75 3.45 19 1 2 49988 4.30 2.58 15 5 1 2 81050 6.15 3.69 19 1 3 49987 2.50 1.50 17 5 1 81046 8.30 4.98 19 1 4 49988 4.30 2.58 15 5 2 8 81052 6.50 3.90 17 1 6 49999 1.20 7.72 17 5 1 81056 8.70 4.20 19 1 4 49988 4.30 2.58 15 5 2 8 80999 1.20 7.72 17 5 1 89999 2.50 1.50 17 5 1 89999 2.50 1.50 1.56 16 5 2 4 89990 2.50 1.50 1.56 16 5 2 4 89990 3.20 1.56 1.56 16 5 2 4 89990 3.20 1.50 1.56 16 5 2 4 89997 2.70 1.62 17 1 6 49995 5.50 3.30 14 5 2 89999 3.20 1.92 17 1 6 49995 5.50 3.50 3.00 14 5 1 2 89999 3.20 1.92 17 1 6 49995 5.50 3.50 3.00 14 5 1 2 89999 3.20 1.92 17 1 6 49995 5.50 3.50 3.00 14 5 1 2 89999 3.20 1.92 17 1 1 6 49995 5.50 3.50 3.00 14 5 1 2 89999 3.20 1.92 17 1 1 6 49995 5.50 3.50 3.00 16 5 2 4 89996 5.50 3.30 17 1 3 49995 5.50 3.50 3.00 14 5 1 2 89999 3.20 1.92 17 1 1 6 49995 5.50 3.50 3.00 16 5 2 4 89996 5.50 3.30 17 1 3 49995 5.50 3.50 3.00 16 5 2 4 89999 3.20 1.92 17 1 1 6 49995 5.50 3.50 3.00 16 5 2 4 89999 3.20 1.92 17 1 1 6 49995 5.50 3.50 3.00 16 5 2 4 89999 3.20 1.92 17 1 1 6 49995 5.50 3.50 3.50 17 1 1 6 49995 5.50 3.50 3.50 17 1 1 6	40322	1.60	.96	19				80080	9.25	5.55	19	1	6	4
40328	40324	1.60	.96	19	5		7	80084	10.75	6.45	19	1	6	12 6
40330 1.75 1.05 19 5 8 80090 13.00 7.80 19 1 7 40332 1.75 1.05 19 5 8 80090 13.75 8.25 19 1 7 40335 1.95 1.17 19 5 8 80094 14.50 8.70 19 1 9 49974 4.80 4.48 9-20 5 3 80096 15.25 9.15 19 1 9 49975 16.00 9.60 13 1 6 8 80098 16.00 9.60 19 1 10 49977 3.00 1.80 14 5 1 8 80100 16.75 10.05 19 1 10 49978 2.60 1.56 20 5 6 80112 30.00 18.00 19 1 10 49979 1.00 .60 20 5 3 81034 2.30 1.38 19 1 1 49980 3.60 2.16 20 10 5 81036 2.30 1.38 19 1 1 49981 2.60 1.56 15 5 1 2 81038 2.75 1.65 19 1 2 49982 1.90 1.14 15 5 1 81040 3.30 1.98 19 1 2 49983 2.15 1.29 17 5 14 81044 4.40 2.64 19 1 2 49984 3.25 1.95 15 7 1 81046 5.75 3.45 19 1 2 49985 .60 3.6 2.16 15 5 1 2 81036 6.55 3.69 19 1 3 49986 .60 3.6 2.16 15 5 1 2 81050 6.15 3.69 19 1 3 49987 2.50 1.50 17 5 1 2 81052 6.90 4.14 19 1 3 49988 4.30 2.58 15 5 2 81058 7.00 4.20 19 1 4 49988 4.30 2.58 15 5 2 81058 7.00 4.20 19 1 4 49989 1.20 .72 17 5 4 80992 2.50 1.50 20 1 1 49990 2.00 1.20 17 5 1 80058 7.00 4.20 19 1 4 49991 1.25 .75 20 5 8 89994 1.20 .72 14 1 49992 2.60 1.56 16 5 2 4 89995 5.50 3.90 17 1 6 49993 5.00 3.00 16 5 2 4 89996 5.50 3.90 17 1 6 49993 5.00 3.00 1.65 5 2 4 89996 5.50 3.90 17 1 6 49995 6.00 3.60 1.56 16 5 2 4 89997 2.70 1.62 17 1 6 49995 5.50 3.00 1.92 17 1 1	40328	1.60	.96	19	5		6	80086	11.50	6.90	19	1	7	10
49974         .80         .48         9-20         5         3         80096         15.25         9.15         19         1         9           49975         16.00         9.60         13         1         6         8         80098         16.00         9.60         19         1         10           49978         2.60         1.56         20         5         6         80112         30.00         18.00         19         1         10           49979         1.00         .60         20         5         3         81034         2.30         1.38         19         1         1           49981         2.60         1.56         15         5         1         2         81036         2.30         1.38         19         1         1           49981         2.60         1.56         15         5         1         2         81036         2.30         1.38         19         1         1           49982         1.90         1.14         1         5         1         81036         2.35         1.38         19         1         2           49984         3.25         1.95         15	40330	1.75	1.05	19	5		7	80090	13.00	7.80	19	1	7	12
49975         16.00         9.60         13         1         6         8         80098         16.00         9.60         19         1         10           49978         2.60         1.56         20         5         6         80112         30.00         18.00         19         1         10           49979         1.00         .60         20         5         3         81034         2.30         1.38         19         1         1           49980         3.60         2.16         20         10         5         81036         2.30         1.38         19         1         1           49981         2.60         1.56         15         5         1         2         81036         2.30         1.38         19         1         2           49982         1.90         1.14         15         5         1         2         81036         2.75         1.65         19         1         2           49985         3.25         1.95         15         7         1         81046         5.75         3.45         19         1         2           49986         3.60         2.16         15	40336	1.95	1.17	19	5		8	80092	13.75	8.25	19	1	7	7
49973         3.00         1.80         14         5         1         8         80098         16.00         9.60         19         1         10           49978         2.60         1.56         20         5         6         80112         30.00         18.00         19         1         10           49978         2.60         1.56         20         5         6         80112         30.00         18.00         19         1         13           49980         3.60         2.16         20         10         5         81036         2.30         1.38         19         1         1           49981         2.60         1.56         15         5         1         2         81036         2.30         1.38         19         1         1           49982         1.90         1.14         1.5         5         1         2         81038         2.75         1.65         19         1         2           49983         2.15         1.29         17         5         14         81040         3.30         1.98         19         1         2           49984         3.25         1.95         15 <td>49974</td> <td>.80</td> <td>.48</td> <td>9-20</td> <td>5</td> <td></td> <td>3</td> <td>80096</td> <td>15.25</td> <td>9.15</td> <td>19</td> <td>1</td> <td>9</td> <td>10</td>	49974	.80	.48	9-20	5		3	80096	15.25	9.15	19	1	9	10
49978         2.60         1.56         20         5         6         80112         30.00         18.00         19         1         13           49979         1.00         .60         20         5         3         81034         2.30         1.38         19         1         1           49980         3.60         2.16         20         10         5         81036         2.30         1.38         19         1         1           49981         2.60         1.56         15         5         1         2         81036         2.75         1.65         19         1         2           49982         1.90         1.14         15         5         1         2         81038         2.75         1.65         19         1         2           49983         2.15         1.29         17         5         14         81040         3.30         1.98         19         1         2           49984         3.25         1.95         15         7         1         81046         5.75         3.45         19         1         2           49985         3.60         2.16         15         5	49977	3.00	1.80	13					16.00	9.60	19	1	10	7
49979         1.00         .60         20         5         3         81034         2.30         1.38         19         1         1           49981         2.60         1.56         15         5         1         2         81036         2.30         1.38         19         1         1         2           49982         1.90         1.14         15         5         1         81040         3.30         1.98         19         1         2           49983         2.15         1.29         17         5         14         81040         3.30         1.98         19         1         2           49984         3.25         1.95         15         7         1         81046         5.75         3.45         19         1         2           49985         3.60         2.16         15         5         1         2         81046         5.75         3.45         19         1         2           49986         .60         .36         15         5         1         2         81056         6.15         3.69         19         1         3           49987         2.50         1.50 <td< td=""><td>49978</td><td>2.60</td><td>1.56</td><td>20</td><td>5</td><td></td><td>6</td><td>80112</td><td>30.00</td><td>18.00</td><td>19</td><td>1</td><td>13</td><td>13</td></td<>	49978	2.60	1.56	20	5		6	80112	30.00	18.00	19	1	13	13
#49981	49980	3.60	2.16	20	10				2.30	1,38	19	1	1	12
49982         1.90         1.14         15         5         1         81040         3.30         1.98         19         1         2           49984         3.25         1.95         15         7         1         81044         4.40         2.64         19         1         2           49985         3.60         2.16         15         5         1         2         81050         6.15         3.69         19         1         3           49986         .60         .36         15         5         12         81052         6.90         4.14         19         1         4           49987         2.50         1.50         17         5         1         2         81058         7.00         4.20         19         1         4           49988         4.30         2.58         15         5         2         81058         7.00         4.20         19         1         4           49989         1.20         .72         17         5         1         89992         2.50         1.50         20         1         1           49990         1.22         .72         17         5 <td< td=""><td>*49981</td><td>2.60</td><td>1.56</td><td>15</td><td>5</td><td></td><td></td><td>81038</td><td>2.75</td><td>1.65</td><td>19</td><td>1</td><td></td><td>10</td></td<>	*49981	2.60	1.56	15	5			81038	2.75	1.65	19	1		10
49987     2.50     1.50     17     5     1     2     81058     7.00     4.20     19     1     4       49989     1.20     .72     17     5     4     89992     2.50     1.50     20     1     1       49990     2.00     1.25     .75     20     5     8     89992     2.50     1.44     20     1       49991     1.25     .75     20     5     8     89994     1.20     .72     14     1       49992     2.60     1.56     16     5     1     14     89995     6.50     3.90     17     1     6       49994     2.60     1.56     16     5     2     4     89996     5.50     3.90     17     1     3       49995     5.50     3.00     17     1     3     49997     2.70     1.62     17     1     6       49995     6.00     3.60     14     5     1     2     89998     3.20     1.92     17     1     1       49995     6.00     3.60     14     5     1     2     89998     3.20     1.92     17     1     1	49983	2.15	1.29			1	14	81040	3.30	1.98	19	1	2	
49987     2.50     1.50     17     5     1     2     81058     7.00     4.20     19     1     4       49989     1.20     .72     17     5     4     89992     2.50     1.50     20     1     1       49990     2.00     1.25     .75     20     5     8     89992     2.50     1.44     20     1       49991     1.25     .75     20     5     8     89994     1.20     .72     14     1       49992     2.60     1.56     16     5     1     14     89995     6.50     3.90     17     1     6       49994     2.60     1.56     16     5     2     4     89996     5.50     3.90     17     1     3       49995     5.50     3.00     17     1     3     49997     2.70     1.62     17     1     6       49995     6.00     3.60     14     5     1     2     89998     3.20     1.92     17     1     1       49995     6.00     3.60     14     5     1     2     89998     3.20     1.92     17     1     1	49984	3.25	1.95	15	7			B1046	5.75	3.45	19	1	2	8
49987     2.50     1.50     17     5     1     2     81058     7.00     4.20     19     1     4       49989     1.20     .72     17     5     4     89992     2.50     1.50     20     1     1       49990     2.00     1.25     .75     20     5     8     89992     2.50     1.44     20     1       49991     1.25     .75     20     5     8     89994     1.20     .72     14     1       49992     2.60     1.56     16     5     1     14     89995     6.50     3.90     17     1     6       49994     2.60     1.56     16     5     2     4     89996     5.50     3.90     17     1     3       49995     5.50     3.00     17     1     3     49997     2.70     1.62     17     1     6       49995     6.00     3.60     14     5     1     2     89998     3.20     1.92     17     1     1       49995     6.00     3.60     14     5     1     2     89998     3.20     1.92     17     1     1	49986		.36	15 15	5	1		81050	6.15	3.69	19	1	3	8
49994 2.60 1.56 16 5 2 4 89997 2.70 1.62 17 1 6 49995 .50 .30 14 5 2 89998 3.20 1.92 17 1 1 49996 6.00 3.60 14 5 1 2 89999 16.00 9.60 14 1 6	49987	2,50	1.50	17	5			B1058	7.00	4.20	. 19	1	4	8
49994 2.60 1.56 16 5 2 4 89997 2.70 1.62 17 1 6 49995 .50 .30 14 5 2 89998 3.20 1.92 17 1 1 49996 6.00 3.60 14 5 1 2 89999 16.00 9.60 14 1 6	49989		2.58		5	2	14	81064	8.30	4.98	19	1	4	12
49994 2.60 1.56 16 5 2 4 89997 2.70 1.62 17 1 6 49995 .50 .30 14 5 2 89998 3.20 1.92 17 1 1 49996 6.00 3.60 14 5 1 2 89999 16.00 9.60 14 1 6	49990	2.00	1.20	17	5	1	134	89993	2.40	1.44	20		1	12
49994 2.60 1.56 16 5 2 4 89997 2.70 1.62 17 1 6 49995 .50 .30 14 5 2 89998 3.20 1.92 17 1 1 49996 6.00 3.60 14 5 1 2 89999 16.00 9.60 14 1 6		1.25	1.55	20	5			89994	1.20	.72	14	1		8
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49996 6.00 3.60 14 5 1 2 89999 15.00 9.60 14 1 6	49994	2.60	1.56	16	5	2	4	89997	2.70	1.62	17	1	6	8
	49996	6.00	3.60	14	5		2	89998 89999	3,20 16.00	1.92 9.60	17 14	1	6	8
49997 7.50 4.50 14 5 1 6	49997	7.50					6					-		



# Gripline

Only Blackhawk features modern wrench handle design! It's called "Gripline" and replaces old cross-knurl patterns.

All grips have attractive streamline grooves running lengthwise. These "Griplines" provide a firm grasp on the wrench but do not cut into the hand. Gripline wrenches are not dirt and grease holders—they wipe clean and dry, keeping their original luster for years.

## IMPORTANT!

#### Blackhawk's "Selected Alloy Steels" Assure Longer Life!

Blackhawk uses a wide variety of steels—selecting the alloy steel best serving the purpose of each wrench.

These "Selected Alloy Steels" in clude Chrome Vanadium, Nickel, Molybdenum and special steels selected for carbon content, annealing, grain size, etc. Physical properties (including shock resistance, ductility, uniform hardness) are at highest practical standards.

No one material, except Hexite, has all the above qualities. Hexite, strongest wrench steel known, is used exclusively in Blackhawk Nugget Socket Wrenches and New Blackhawk-Armstrong Automotive Open-Ends.

Blackhawk also selects various grades of steel for different parts of a wrench—a 3/8" or 1/2" square drive Free Wheeling Ratchet having miscellaneous parts made of 8 various steels—each best serving its purpose.

# New NUGGET Socket Wrenches

# ELIMINATE NEED FOR 3/8" AND 1/2" SERIES

Great demand for Nuggets—the amazing wrenches introduced early in 1938—has caused Blackhawk to forge ahead with additions and refinements. Mechanics themselves have proved Nuggets the right tools for modern work! No reservation is made in positively recommending Nuggets in place of all 3/8" and 1/2" series wrenches!



3/8" Drive Socket — replaced by 7/16" series





1/2" Drive Socket — replaced by 7/16" series

# HEXITE STEEL the trick /

Hexite's strength (70% stronger than chrome vanadium) permits Nuggets to be made light, slim and small to handle work of 3/8" series—yet strong and tough for all 1/2" series work. Double-Duty 75" drive Nuggets handle everything! Hexite—strongest tool steel known—has been used 11 years in Blackhawk power-driven sockets for assembly lines of General Motors, Ford, Chrysler and others.





Full Range of Double-Duty 7/16" SERIES SOCKETS AND HANDLES—FOR Both CRAMPED QUARTERS AND HEAVY WORK



and socket sizes,

right.

3/8" Square Drive
— Actual
size. Representative handles and
socket sizes — in
diagram at right—
duplications with
1/2" series in red.



1/2" Square Drive
Actual
size. Representative handles and
socket sizes in diagram at right—
duplications in red.

Eliminate THIS TIME-WASTING, EXPENSIVE 76% DUPLICATION OF 3/8" & 1/2" SERIES

<sup>3</sup>8" Series Handles and Sockets are Limited in Range — FOR CRAMPED-QUARTER WORK ONLY

Duplications of 'a" and '2" handles and sacket sizes indicated in RED



1/2" Series Handles and Sockets are Limited in Range — FOR ORDINARY HEAVY PULLS. Nuggets do the same work BETTER!



#### ARE ULTRA MODERN

The days of expensive duplicate wrench equipment are over. Modern automobiles and machinery are compact — demanding wrenches for both tight quarters and heavy pulls. Mechanics no longer need invest in both 3/8" and 1/2" series — Nuggets serve their place with one drive for all work.

#### NUGGETS HAVE DURABLE

Chromium finish

Nuggets are finished in durable CHRO-MIUM at mechanics' request! Chromium plating was introduced by Blackhawk in 1929 and has proved the BEST finish—enabling mechanics to have bright tools at all times, easy to clean and find. This rich finish—which would highlight defects in ordinary wrenches—reveals the smooth, flawless features of Blackhawk wrenches.

# NUGGETS Save 42% IN TOOL INVESTMENT

Figure it out yourself—add up the cost of handles and sockets in both 3/8" and 1/2" series. Subtract the total price of Nugget handles and sockets — the difference is YOUR BIG SAVING!

A mechanic would buy 50% MORE TOOLS in 3/8" and 1/2" series to have the same range of 50 Nuggets. While Nuggets save 42% in COST — they also SAVE TIME because all tools are interchangeable. (Over 23,000 combinations can be made with a 50-piece Nugget set.)

Nuggets not only do the work of  $\frac{3}{8}$ " and  $\frac{1}{2}$ " wrenches — but actually handle many jobs not adapted to either of the old drives.

# It's Easy-CHANGE

#### OVER TO NUGGETS NOW!

Start saving time and money, do better work
— be "King of the Shop" — tool up with
Nuggets! Buy Nuggets in big matched sets
—they're available in low-priced, mediumpriced and ultra-deluxe assortments. See
pages 10, 11 and 12.

Nuggets are also sold individually by Black-hawk jobbers—enabling fill-ins to small sets or build-up of complete equipment on tool-at-a-time plan. Adaptors (page 9) permit use of your old  $\frac{3}{8}$ " and  $\frac{1}{2}$ " specials.

# The lightest Wrenches The you've ever twirled. BUT PLENTY TOUGH!

NUGGETS ARE AS STRONG
AS 1/2"TOOLS



Equal Strength



Diagram above shows cross-sections of a bar of Hexite steel and a bar of Chrome Vanadium. Although 33-1/3% smaller—the Hexite bar has same strength of Chrome Vanadium. That's why Nuggets (made of Hexite) are smaller but equally as strong as heavy and clumsy ½" tools made of ordinary high-grade alloy steels.

# NUGGETS GET IN TIGHT SPOTS - SAME AS 3/8" SERIES



# Same Diameter



Diagrams (at left and right) show drive ends of smallest sockets in 3/8" and 7/16" series. Both sockets have same 11/16" outside diameter—PROOF that Nuggets get in everywhere and take place of 3/8" series.



NUGGET WRENCHES
ARE SMALLER — Dotted line shows relative
size of 1/4" tool compared with Nugget.

NUGGET HANDLES A V E R A G E 3 1 % LIGHTER THAN 1/2" SQUARE DRIVE TOOLS.





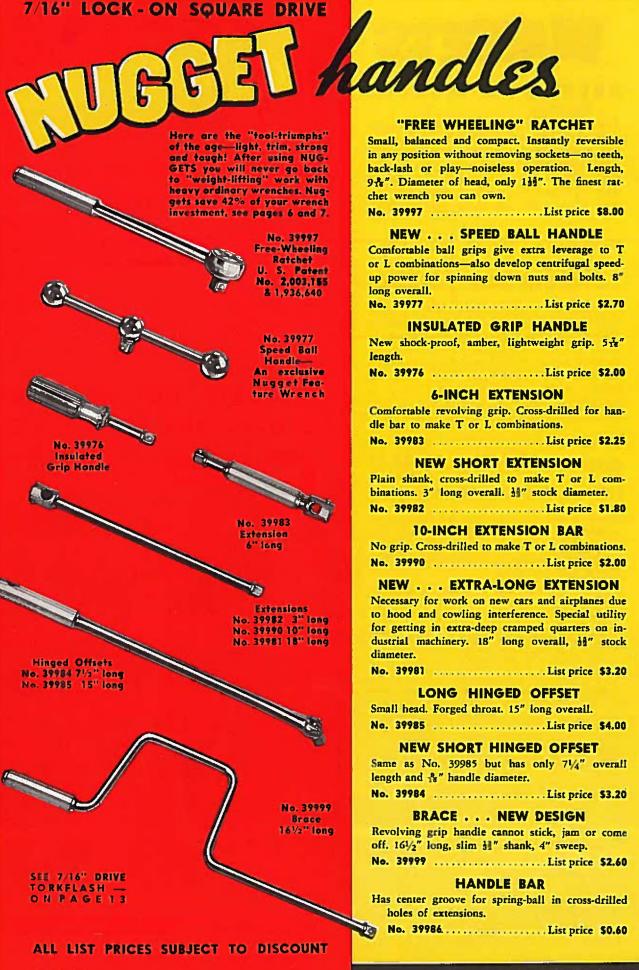
A 50-PIECE NUGGET SET IS 50% LIGHTER AND 52% LESS BULKY than a combination set of 1/4" and 1/2" Square Drive Wrenches of similar utility.

GRAPH OF LIFE SPAN

Nuggets outwear all other high-grade tools,

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	RENC	RENCH								

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# Sockets and Attachments

#### THIN, DOUBLE HEXAGON SOCKETS

Socket	Socket	List	Socket	Socket	List
No.	Size	Price	No.	Size	Price
*35110 35112 35114 35116 35118 35119 35120 35121 35122	16"" 1/2" " 15" " " 11"	\$0.85 .85 .85 .85 .85 .85 .85	35124 35126 35128 35130 35132 35134 35136 35140	3/4" 118" 7/8" 118" 1" 1-18" 11/8" 11/4"	\$1.05 1.05 1.35 1.35 1.45 1.85 2.10

<sup>\*</sup>Single Hex

#### DOUBLE SQUARE SOCKETS

35212	3/8"	\$0.90	35218	14"	\$0.90
35214	78"		35220	5/4"	1.00
35216	1/2"	.90	35224	3/4"	1,35

#### LONG, THIN, DEEP, DOUBLE HEX SOCKETS

35314	7 "	51.35	35326	14"	\$1.60
35316	1/2"	1.35	35328		1.60
35318	18"	1.35	35330	7/8" 11 "	1.75
35320	5/8"	1.60	35332	1‴	1.75
35322	118"	1.60	35336	11/8"	2.10
35324	3/4"	1.60			

#### **DOUBLE HEX UNIVERSAL JOINT SOCKETS**

Socket No.	Size	Length	List Price	Socket No.	Size	Length	List Price
35414	7 "	112"	\$2.95	35420	5/8"	111"	\$2.95
35416	1/2"	135"	2.95	35422	5/8" 11"	1111	3.05
35418	18"	132"	2.95	35424	3/4"	111"	3.05

#### UNIVERSAL JOINT-45°

No. 39978-18" diameter, 17/8" overall length. List price \$2.90

#### DRAG LINK SOCKETS

No. 39979-13" wide and 1/8" thick ......List price \$1.00

#### SCREW DRIVER BITS

Four sizes—two regular and two new Phillips Head style,  $3^{1}/4''$  long.

No.	Description	List price
39965	Regular .035" x 1/4" Blade	\$1.05
39966	Regular .040" x 32" Blade	1.15
39971	No. 2 Phillips	1.65
39972	No. 3 Phillips	1.85

#### **ADAPTORS**

For using 76" Nugget handles with "specials" in 3/8" and 1/2" series. Makes change-over to Nuggets easy.

No.	Description	List price
34964	3/8" male, √s" female	\$0.80
39964	-1" male, 3/g" female	.80
39974	78" male, 1/2" female	.80
	1/2" male, 18" female	.80

ALL LIST PRICES SUBJECT TO DISCOUNT

COMPLETE RANGE OF NUG-GET SOCKETS — CHROMIUM PLATED — 7/16" square drive answers every demand for ciose-quarter work. Walls are extra-thin but tough — butts narrow for tight places ordinarily requiring 1/2" series. Nuggets are as strong as 1/2" series. All sockets hot broached fer smooth interiors and longer life.



Double Square Sockets, Ness. 35212-35224. Short drive end for emple clearance in handle combinations.

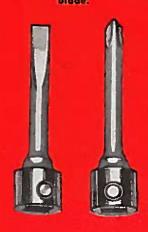


Universal Joint Sockets

— Ultra-short overall
length — deep broach
— close-coupled.



Drag Link Socket No. 39979. Sturdy — wide blade.



Thin, Double Hexagon Sockets, Nos. 35112 to 35140. 17 sockets cover entire range of sizes found in 3/4" and 1/2" drive sets.



Long Deep Sockets Nes. 35314 to 35336. Have thin walls and extradeep broaching. For spark plugs, special automotive, aviation and industrial jobs. 11 sizes. Large bare fits this series for airplane spark plugs.

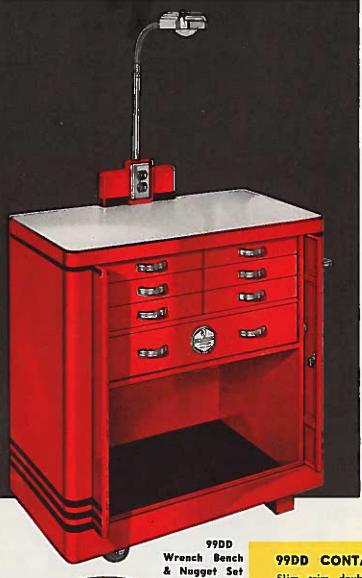


Adaptors are low cost. Makes 1/6" and 1/2" specials interchangeable with Nuggets.

Screw Driver Bits include two of regular design and two of Phillips type.

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**BLACKHAWK** 



# WRENCH BENCH & NUGGET SET

Here's the "flagship" of the Nugget fleet — the 99DD! Complete with 53 selected double-duty Nuggets in the DD stand—the most practical, ultramodern portable wrench set ever designed.

The DD stand is a combination wrench cabinet and work table with ample drawer space and a solid \( \frac{1}{8}'' \) steel work top. Includes adjustable work light, electrical outlets and "disappearing" doors equipped with tumbler lock. Stand is made of heavygauge steel with red baked-enamel finish and black trimmings.

Stand is 321/2" wide, 171/2" deep and 34" high with 3" toe space. All seven drawers have chromium-plated pull handles. Bottom compartment is roomy for bulky tools, electric drills, etc. A chromium plated handle on right side of stand is used when rolling stand on its two rubber-tired wheels. End of stand on which handle is mounted has two fixed legs—giving stand same rigidity as work bench.

#### 99DD CONTAINS MASTER ASS'T OF NUGGETS

Slim, trim, double-duty Nuggets are fitting companions for the modern DD stand. Be "King of the Shop" by owning the 99DD—free individual nameplate identifies this set as your very own. The following 53 pieces are included in the 99DD assortment:

#### HANDLES AND ATTACHMENTS

39965—Regular Screw Driver 39966—Regular Screw Driver 39971—No. 1 Phil. Screw Driver 39972—No. 2 Phil. Screw Driver 39975—Torkflash Tension Wrench 39976—5½" Grip Handle 39978—Universal Joint 39979—Drag Link Socket 39981—18" Extension	39982—3" Extension 39983—6" Extension 39984—714" Hinged Offset 39985—15" Hinged Offset 39986—Handle Bar 39990—10" Extension 39997—Free Wheeling Ratchet 39999—Brace
---	--

39981—18"	Extension			
	Regul	ar Thin Dou	ble Hex:	
*35110—fk" 35112—34" 35114—1/a" *Single Hex	35118—8" 35119—18" 35120—54"	35121—11" 35122—11" 35124—14"	35126—18" 35128—76" 35130—18"	35132—1" 35134—1 ½"
	Doubl	e Square So	ckets:	
35212-36"	35214— <sub>18</sub> "	35216—1/2"	35218—18"	352205/4"
	Long D	ouble Hex	Sockets:	
35314———————————————————————————————————	35318— % " 35320— 5% "	35322— }" 35324—34" 35326— }"	35328—7/6" 35330—111"	35332—1" 35336—1½"
	Universal Ja	int Sockets,	Double Hex:	
35414	35416—1/2"	35418—15" 35420—54"	35422—}}"	35424—3/4"

No. 99DD—Complete with 53 Nuggets, the DD stand and Electrical Fixtures ...List Price—Eastern
List Price—Western\* \$192.00

\*Western prices apply in Arizona, California, Idaho, Nevada, Oregon, Utah and Washington.



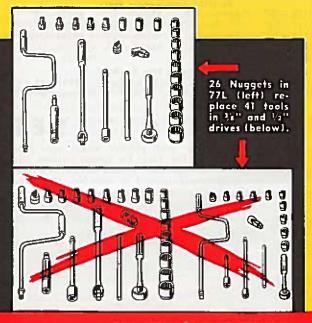
Note how rolling doors close to lock up wrenches and equipment. Vise can be mounted on one end of the reinforced solidsteel work top. Blackhawk Engineers "thought of everything" when the 99DD Wrench-Bench was designed.



Here are the sets thousands have bought as their "starter" on Nuggets. 77L includes 26 most essential Nugget wrenches in the CB case. 77K is the same as 77L but includes the remarkable Torkflash tension wrench.

The 26 Nuggets—with their  $\frac{7}{18}$ " double duty square drive—do all the work of 41 regular  $\frac{3}{8}$ " and  $\frac{1}{2}$ " square drive tools (see diagram below). Figure the saving yourself—comparing the attractive 77L price with total cost of  $\frac{3}{8}$ " or  $\frac{1}{2}$ " tools in ANY quality line.

The attractive roomy CB chest has practical drop-front design. Size 20½" long, 85%" wide, 6½" high. Plenty of extra room for hammers, pliers and other tools—plus later addition of Nugget "fill-ins." The 77L handles all automotive service and is especially ideal for full range of work on Ford and Chevrolet—also serves trucks and modern tractors. See pages 6 and 7 on how Hexite steel makes Nuggets double-duty, light-weight and long-lived. Then invest in Nuggets—nothing less than a 77L. Thousands now using Nuggets are boosting weekly wages or making more money on flat-rate jobs.



#### CONTENTS OF 77L and 77K

39978	Universal loint	39986	Handle Bar
			10" Extension
			ee Wheeling Ratchet
39985	Hinged Offset	39999	Brace
39975	Torkflash (inclu	ded in 77	K only-not in 77L)

#### DOUBLE SQUARE SOCKETS

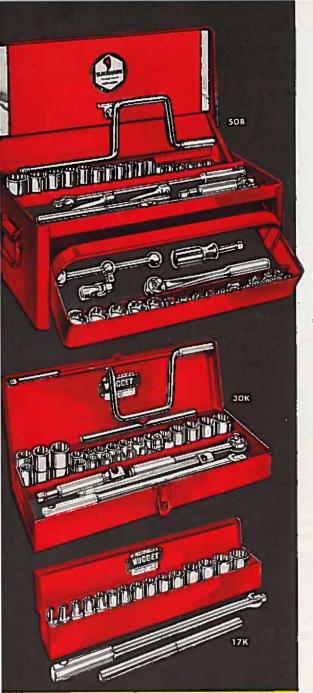
352161/2"	35	35218—16"		35220—5/8"	
REGULAR	THIN,	DOUBLE	HEX	SOCKETS	

*35110—∄"	35119—38"	35126— <del>18</del> "
35112—3/8"	35120—5/8"	35128— <sup>7</sup> / <sub>8</sub> "
$35114 - \frac{7}{18}$ "	35121	35130—- <del>1</del> 8"
35116—1/2"	35122—11	35132-1"
35118—18"	35124—3/4"	35134—118"
*Single Hex		

No. 77L Set, Complete ..... List price \$49.40

No. 77K Set, Complete
(Includes Torkflash) .....List price 62.00

ALL LIST PRICES SUBJECT TO DISCOUNT





#### FREE NAMEPLATE

A neat chromium-finished nameplate is sent free to all buyers of 99DD, 50B, 77L and 77K Nugget wrench sets. The type above is furnished with the 50B and 99DD, and assembles behind the tumbler lock. 77L and 77K receive attractive rectangular nameplate. You will be proud to have your name identify a modern set of Nuggets!

#### 50 B NUGGET

Here's a compact set of 50 Nuggets for complete service work. Covers full socket range in double square, double hex, long deeps and universal type.

The spanking, red chromium-trimmed No. 19508 case is 18% "long, 7¾" high and 9½" wide; made of sturdy steel. Assortment of 50 Nuggets in ½" double-duty drive includes the following:

HANDLES AND ATTACHMENTS

39976—Grip Hdle. 51/2" Ig.
39977—Sp. Ball Hdle. 8" Ig.
39978—Universal Joint
39979—Drag Link Socket
39985—15" Offset
39986—Handle Bar
39990—10" Extension
39997—Free Wheel
39998—6" Extension Bar 39990—10" Extension 39997—Free Wheel. Ratchet

SOCKETS

	Double	e panale:	
35212-3/8"	35214-18"	35218—18"	35224-3/4"
	35216—1/2"	35220-5/8"	
	Regular Thi	n Double Hex:	
#35110—f8"	35118—16"	35122—17	35130- 18"
35112-3/8"	35119-35"	35124-3/4"	35132—1"
35114-18"	35120—5/8"	35126—18"	35134-114"
35116-1/2"	35121-33"	35128-7/8"	
*Single Hex			
THE PERSON NAMED IN COLUMN	Long Double	Hex Socket:	
35314-18"	35320-5/8"	35326-18"	35332-1"
35316-1/2"	35322-11"	35328—7/8"	35336-11/8"
35318—18"	35324-3/4"	35330-18"	100
Uni	versal Joint Sa	cket, Double H	ex:
35414-18"	35416-1/2"		
	35418—18"		74
	Scre	wdriver:	
20065	035-1/."	20066	040-11"

39965—.035x<sup>1</sup>/<sub>4</sub>" Free name plate mounts behind built-in tumbler lock. No. 50B-Complete ...... List price \$97.00

# NUGGET

Thirty-piece general utility assortment. Includes double hex, double square and long deep sockets plus 8 basic handles and attachments. Red-enameled No. 19515 case (size 17" x 51/2" x 3") is compact home for the following assortment of light-weight, double-duty Nuggets.

HANDLES AND ATTACHMENTS

39978—Universal Jt. 39979—Drag Link Socket 39983—6" Extension 39985—15" Offset 39986—Handle Bar 39990—10" Extension 39997—Ratchet 39999—Brace

SOCKETS **Double Square:** 

35216-1/2" 35218-18" 35220-5/8" Regular Thin Double Hex: 35122—18" 35124—34" 35126—18" 35118-18" 35130—{8" 35132—1" **\*35110-**35112—1/8" 35114—18" -12" 35119-35120-35134-116" 35116—1/2" 35128—7/8" 35121-\*Single Hex

Long Double Hex Socket: 35326—18" 35328—7/8" 35318—18" 35332-1" No. 30K-Complete ..... . List price \$49.85

# NUGGET

Seventeen-piece assortment with popular socket sizes plus hinged offset and handle bar. Ideal for service stations, tire shops and truckers. An easy start toward mechanics's complete Nugget equipment. Furnished in trim No. 19516 red case, size 151/2"x21/2"x2".

CONTENTS OF SET

39985-	Hinged Offset	39986—	Handle Bar
	Regular Thin D	ouble Hex Soci	kets:
*35110-18"		35122—11	35130-14"
35112-3/8"	35119-12"	35124-3/4"	35132—1"
35114-18"	35120—5/8"	35126—18"	35134—116"
35116—1/2"	35121-33"	35128—7/8"	
*Single Hex			
No. 17K-	Complete		List price \$21.60



#### A PRECISION TOOL . . .

PERMANENTLY ACCURATE because TORKFLASH measures deflection of its standard spring-steel shaft directly. The most simple, practical, accurate method known. No delicate coils or hair springs, no friction lever devices or dial hook-ups! Dropping does not affect accuracy nor impair operation of flash signal.

#### TORKFLASH IS NECESSARY

for use on all Automobile, Truck, Tractor, Diesel, Airplane, Industrial Assembly and Specialty Jobs where a series of bolts must be tightened uniformly.

SMALL BOLTS are not broken with "measured" pulls of TORKFLASH.

#### FREE INTRODUCTORY OFFER

This bakelite case (below) — in brilliant red and glossy black — is a beautiful "home" for the sparkling chromium Torkflash. Furnished free with each Torkflash tension wrench—for limited time only.

#### PRACTICAL . . . ACCURATE . . . SIMPLE . . .

Torkflash results from two years of experimental research. Realizing that every mechanic must own a tension wrench—Blackhawk sought the most practical, accurate, and simple design at the lowest possible cost to mechanics. Torkflash is Blackhawk's answer—Just set pointer at required pull—the flash tells you when to stop pulling.

#### FIVE - IN - ONE TENSION SCALE

No mathematics necessary to operate Torkflash! Has all "Units of Measure" found in service and instruction manuals, Five-inone scale (at right) slips over cylinder enclosing flashlight as-



closing flashlight assembly at base of handle grip. Cylinder is rotated by
finger pressure to show desired scale. When no tension
recommendations in either inch-pounds or foot-pounds
are available for special jobs—simply determine U.S.S.
or S.A.E. bolt diameter and set pointer accordingly.
For checking pre-set tensions direct—simply reverse
revolving scale unit so that pointer pulls from zero to
tension of bolts.

#### CHOICE OF TWO DRIVES

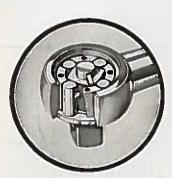
Nos. List Price 39975—Double-Duty 7/16" square drive ... \$16.00 49975—Standard ½" square drive ..... 16.00

Page Thirteen

#### WRENCHES

# RATCHETS

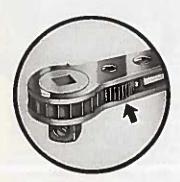
Selected Alloy Steel—Chromium Plated



Cut-through view of "Free Wheeler" showing construction. Rollers held firmly in contact by spring-backed plunger.

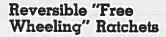


Narrow, neat appearing head of No. 49995. Convenient lobes on top plate facilitate reversing. Simply hold plats with thumb and turn socket.



Note 34" square opening on top side of 34999 and 24992 ratchets for refrigerator valves. Ratchet reverses by simply flipping lever indicated by arrow.

SEE DOUBLE-DUTY NUGGETS AND SETS — Pages 6 to 13



1/8" & 1/2" Square "Lock-On" Drive

Note these outstanding features — instant reverse
without removing sockets — noiseless smooth
operation — no teeth — no back-lash — instant
reverse in any position — no play — small diameter
head—narrow neck—light weight—true balance.

Number	Dia. of Head	Length	"Lock-On" Drive	List Price		
34981	1 %"	7"	3/6"	\$6,25		
49997	154"	10½"	1/2"	7.50		

# Mechanical Ratchets—Reversible

1/4" & 1/8" Square "Lock On" Drive



Two dual purpose mechanical ratchet wrenches—one has ¾" drive, the other has ¾" drive. Both have ¾" square opening in back of lug for refrigerator valves.

34999	1"	635"	34"	\$4.00
24992	1"	55%"	54"	4.00

#### 1/2" Square "Lock-On" Drive



0.009 1,995,009

U. S. Pat. No.

(6)

U. S. Pat. Nos. 2,003,155 1,936,640

A greatly improved mechanical ratchet. Double ratchet engagement gives smoother action — reverses instantly without removing sockets (see illustration at left) — small head, 1%" diameter and narrow neck.

49996	136"	1035"	3/2"	\$6.00
				-



For fast action in close quarters—long leverage to jerk nuts loose or set them home. Instant reverse. Cadmium plated—unusually tough and strong.

49977	10"	14"	\$3.00

#### 34" & I" Square "Lock-On" Drive



U. S. Pat. No. 1,873,472 and No. 1,807,134
For all heavy duty work. Instantly reversible by shifting patented lug.

69999	23/4"	16"	3/4"	\$10.35
89999	27/3"	20"	1"	16,00

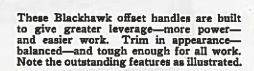
#### Replacement Drive Lugs

"Lock-On" For use wit Number Sq. Drive Ratchet No		List Price
	Old 9811 916N & 69999 89999	\$0.50 1.00 1,20 .35
	Drive	" Old 9811 " 916N & 69999 89999

## BLACKHAWK WRENCHES

# OFFSET HANDLES

Selected Alloy Steel—Chromium Plated



#### Hinged Offset Handles

	Imiged	- maer	HULLIGIES	
No.	Stock Dia.			List Price
24999	A"	5"	34"	\$2.00
34986	1."	8"	36"	2.85
49984	36"	1154"	35"	3.25
49985	56"	1556"	34"	3.60
49988	56"	18"	54"	4.30
69998	11"	19"	34"	7.15

#### Sliding Offsets

49982 69997	A" H"	11"	34"	\$1.90 3.75

#### **Obstruction Offset Handles**

	8			
24994	å"	5"	34"	\$1.50
49981	%"	11"	34"	2.60

#### Handle Bars

24997	1/4" diameter, 41/2" long. Used with 24996 to make T or L wrenches	\$0.40
34985	1/8" diameter, 7" long. Used with 34988, 34987, 34984, 34986, 34983, 34981 and 34997 to make T or L wrenches	.50
49986	#" diameter, 11" long. Used with 49983, 49984, 49985, 49987, 49988 and 49990 to	.00
	make T or L wrenches. Also for extra leverage with 49981, 49996, and 49997	.60
69996	12" diameter, 18" long. Used with 69998, 69995 and 69994 to make T or L wrenches	1.50



Double duty wrenches — Hinged Offsets can also be used as T or L wrench. Note cross hole in grip for use with handle bar.

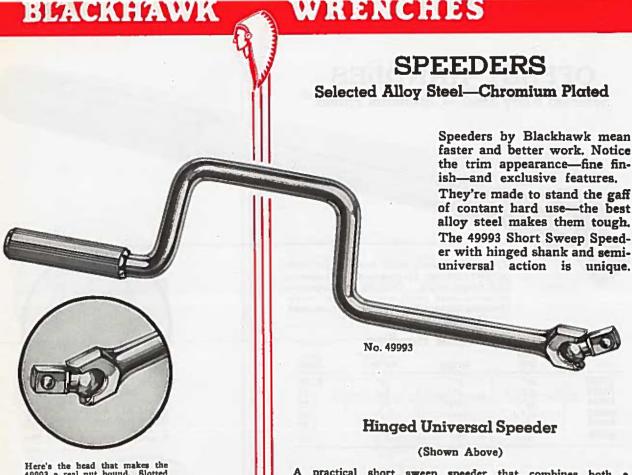


Plenty of clearance with these Sliding Offsets. Handle does not stick out beyond head. Note recess for stop ball. Spring ball in heads holds it in any position.



Nothing beats the Obstruction Offsets for minimum clearance. Thin wide throat—small narrow head—but strength is there plenty.

SEE DOUBLE-DUTY NUGGETS AND SETS—Pages 6 to 13



A practical short sweep speeder that combines both a hinged shank for offset leverage and semi-universal action for speed in close quarters.

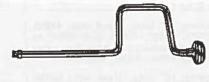
No.	Stock Dia,	Length	Shank Length	Sweep	"Lock-On" 8q. Drive	List Price
49993	5/6"	1 1734"	7"	23/4"	1 1/2"	\$5.00

#### **Brace Handles**



	4"	1556"	6" 8½"	434"	1/4"	\$2.60 2.80
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#### Speeder Handles



34982 49994	₹4" ₹4"	18" 19"	10"	336"	34" 1/4"	\$2.00 2,60
----------------	------------	------------	-----	------	-------------	----------------

Here's the head that makes the 49993 a real nut bound. Slotted throat gives 90° offset for leverage and 45° universal action.



Grip handles on Braces never come off, stick, or jam. They're held by Blackhawk's patented method as shown. Smooth action means easy work.



U. S. Pat. No. 1.764,690

Arrows indicate hardened thrust and sleeve bearings that make for real speed — minimize wear and prevent sticking. Note grip is spun onto handle — can't come off.

SEE DOUBLE-DUTY NUGGETS AND SETS — Pages 6 to 13

ALL LIST PRICES SUBJECT TO DISCOUNT

#### BLACKHAWK WRENCHES

# **EXTENSIONS**

#### Selected Alloy Steel—Chromium Plated

Extensions increase the reach and adaptability of all handles. For work in out-ofthe-way places, Blackhawk Extensions with the exclusive "Lock-On" feature save time and have the rigidity of one-piece construction. Attachments can't drop off to become lost or cause damage.





#### Extensions with Revolving Grip

No.	Stock Dia.	Length	"Lock-On" Sq. Drive	List Price
49983	5/a"	6"	1/3"	\$2.15
49987	5/a"	10"		2.50

#### **Grip Handle and Extension**



Here are two tools in one. Use them as a grip handle to quickly set a nut—or as an extension for extra reach. Ideal for ignition and carburetor work. Cross drilled for handle bar to make T or L.

24998 34997	3/3"	5"	5/4" 3/4"	\$1.20 1.70
01221	14	3	978	24/0

#### Standard Extension Bars

†24996	Δ"	5**	3/4"	\$1.05
34988	7 "	3"	36"	1.40
34987	74"	5"	34"	1.50
34984	78"	10"	34"	1.60
34983	7. "	18"	36"	2.15
††49989	***	2"	3/3"	1.20
49990	18"	10"	3/2"	2.00

†Not equipped with Lock-On. ††Similar in appearance to No. 89998 shown below. Can be used with handle bar No. 49986 to make sliding offset.

#### Heavy and Extra Heavy Duty Extensions

69995	11"	814"	34"	\$3.10			
69994	11"	17"	3/4"	3.80			
89996	11/4"	9"	1"	5.50			
89995	11/4"	18"	1"	6.50			

#### Sliding T—Extra Heavy Duty



No.

89997—Bar only, 1½" dia., 23" long. Used with 89996,
89995, and 89998. List Price, each......\$2.70

89998—Head and adaptor for 89997. 1" Square Lock-On 

All Extra Heavy Duty Series-1" square drive are finished in Cadmium.

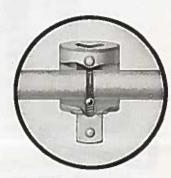
ALL LIST PRICES SUBJECT TO DISCOUNT



Blackhawk Extensions do double duty — cross hole in head takes handle bar to make T or L wrench. Spring ball holds bar firmly in any position.



Note the trim, clean, business-like appearance of the Blackhawk drive. Edges chamfered to pre-vent sticking—milled to a per-fect fit—with butt stop that keeps socket in position.



Here's a feature of the Sliding T—spring ball in head engages with groove in center of handle to prevent slipping—a real convenience for heavy work.

SEE DOUBLE-DUTY NUGGETS AND SETS - Pages 6 to 13



No. 21006 Series



No. 30008 Series



No. 40112 Series



No. 30314 Series



No. 19055 Set



Nos. 21106 Series 30108 " 40210 "



Nos. 3327—3329—3731 Complete with Handle.

SEE DOUBLE-DUTY NUGGETS AND SETS — Pages 6 to 13

#### Page Eighteen

# WRENCHES

21108

21110 | †Single Square

## SOCKETS

#### Selected Alloy Steel—Chromium Plated

To determine socket size—last two figures in each socket number indicates size in 32nds of an inch. Example: No. 40114 indicates 14/32" or 7/16".

#### Extra Small Series—1/4" Square Drive

		Wall Double	Hex Bocket		
No.	Socket Bize	List Price	No.	Socket Size	List Price
†21006 †21007 †21008 †21009	#" #" #"	\$0.45 .45 .45 .45	†21010 †21011 21012 21014	#" 11" %"	\$0.45 .45 .45
†Single Hex.		ouble Square	Sockets		
+21106		20 45 H	21112	9/8	\$0.55

#### Small Series—%" Square "Lock-On" Drive

21114

	Thir	Wall Doubl	e Hex Socke	ts	
†30008 †30010 30012 30014 30016	¼" Å" ¾" ¾"	\$0.70 .70 .70 .70 .70	30018 30020 30022 30024	14" 94" 11" 94"	\$0.70 .70 .80
†Single Hex		Double Squa	re Sockets	10.5	
30108 30110 30112	%" **" %"	\$0.80 .80 .80	30114 30116	14" 34"	\$0.90 .90

Long Thin	Wall Double	Hex Sockets	1%" to 2"	Long Over	All Lengths
30314	14"	\$0.90	30320	54"	\$1,00
30316	14"	.90	30322	11"	1.15
30318	14"	1.00	30324	34"	1,25

#### No. 19083 Set-Long Thin Wall Sockets

NEW! Includes all six sizes of long, thin-wall double hex sockets in 3/8" series—range from 1/8" to 3/4".
Contents: One each Nos. 30314, 30316, 30318, 30320, 30322 and 30324.
No.
19083 Set—Packed in cardboard box......List Price, Each \$6.20

# Standard Series—1/2" Sq. "Lock-On" Drive

		Thin	M CIII	Donnie	Hex Doc	:Kets		
40112	36"	\$0.80	40121	31"	j \$0.80	40130	11"	\$1.20
40114	78"	.80	40122	11"	.80	40131	H"	1.20
40116	3/4"	.80	40124	3/4"	.95	40132	1"	1.20
40118	fe"	.80	40125	11"	.95	40134	110"	1.50
40119	45"	.80	40126	12"	.95	40136	136"	1.60
40120	56"	.80	40128	7/8"	.95	40140	154"	1.70

#### No. 19055 Set-Thin Wall Sockets

Fourteen of the most popular Thin Wall Sockets packed in strong cardboard box. "Lock-On" feature, ¾" square drive. Sizes from ¾" to 1". One each Nos. 40114, 40116, 40118, 40119, 40120, 40121, 40122, 40124, 40125, 40126, 40128, 40130, 40131 and 40132.

140.		the state of the s	
10055. Ties	Deice	Each\$1	3 00
12022-12121	LIICE	144 bilional and a service of the se	<b>4.</b> 44

	Double Square Sockets									
40210	18"	\$0.75	40220	56"	\$0.751	402301	18"	\$1.40		
40212	34"	.75	40222	11"	.80	40232	1"	1.40		
40214	18"		40224	3/4"		40234	13"	1.60		
40216	1/4"		40225	15"		40236	136"	1.75		
40218	78"		40226	12"		40240	134"	1.85		
40219	11		40228	7/4"	1.15	,	-/-			

#### Spark Plug Sockets

3327—For all	18"		.60
3329—For all	7/8"	and 1" hexagon spark plugs	.60
3731-For all	15"		.60

## BLACKHAWK WRENCHES

#### Stand. Series-1/2" Sq. "Lock-On" Dr.-Cont.

#### Extra Deep Thin Wall Double Hex Sockets

Here is a complete series of extra deep, thin wall double hex sockets. Designed for removing spark plugs—shackle bolts and spring clip nuts. 1/2" square "Lock-On" drive-broaching adapts them to handles in the standard series. Cross hole permits use of bar for leverage. 31/4" over-all length.

No.	Bocket Bize	Max. Diam.	List Price	No.	Socket Size	Max. Diam.	List Price
40316 40318 40320 40322 40324	½" %" ½" ½"	#" 15" 14"	\$1,45 1.45 1.60 1.60	40326 40328 40330 40332 40336	11" %" 11" 1"	1音" 1音" 134" 1音" 1音"	\$1.60 1.60 1.75 1.75 1.95

See table of sockets required for various spark plug sizes-upper right.

#### No. 19051 Set-Extra Deep Sockets

A complete set of deep—thin wall double hex sockets. Sockets range from ½" to 1½". Every car, truck or tractor can be serviced with this set. Packed in strong cardboard box. Contents: One each Nos. 40316, 40318, 40320, 40322, 40324, 40326, 40328, 40330, 40332 and 40336.

#### No. 19082 Set—Spark Plug Sockets

NEW? Five selected spark plug sockets to handle all 1939 model cars. Extra deep, thin wall double hex ½" series. Range from ½" to 1". Packed in strong cardboard box.

Contents: One each Nos. 40320, 40322, 40326, 40328 and 40332.

19082 Set-Packed in cardboard box.....List Price, Each \$8.15

# Heavy Duty Series—¾" Sq. "Lock-On" Drive

60028 34" \$1.25 60040 134" 60030 11" 1.25 60042 134" 60031 11" 1.25 60044 134" 60032 1" 1.25 60046 134" 60034 134" 1.55 60048 134" 60036 134" 1.55 60050 134" 60038 134" 1.55	\$1.75 1.75 1.75 1.90 1.90 2.20	60052 60054 60056 60058 60060 60064	156" 111" 134" 1111" 176" 2"	\$2.20 2.60 2.60 3.00 3.00 3.75
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# Extra Heavy Duty Series—1"Sq."Lock-On" Dr.

80034	14"	\$1.90	80060	12/6"	\$4.25	80082	24."	\$10.00
80036	1%"	1.90	80062	111"	4.50	80084	256"	10.75
80040	134"	2.00	80064	2"	4.75	80086	211"	11.50
80042	14"	2.00	80066	218"	5.50	80088	23/4"	12.25
80044	136"	2.00	80068	236"	6.00	80090	212"	13.00
80046	17."	2.25	80070	21"	6.25	80092	27/4"	13.75
80048	11/4"	2,60	80072	254"	6.50	80094	214"	14.50
80050	14"	2.60	80074		7.00	80096	3"	15.25
80052	156"	2.90	80076			80098	-	
80054	111"	3.25		-/-	7.75		318"	16.00
80056	13/4"	3.50	80078	218"	8.50	80100 *80112	31/6"	16.75
80058	133"	3.75	II 80080 I	21/4	9.25	-OULLE I	316"	30.00

#### Single Square Sockets

81034 81036	11 "	\$2.30	81044	136"	\$4.40	81052 81058	156"	\$6.90 7.00
81038 81040	14"	2.75 3.30	81046 81050	14"	6.15	81064	2"	8.30

<sup>\*</sup>Produced only on special order.

#### TABLE OF SOCKET NOS. FOR VARIOUS TYPES OF SPARK PLUGS

No.	Size	Spark Plug
10322	14"	10 mm. Globe, Auto Lite and Champion
40318	A."	10 mm. AC-Y series
40320	7."	10 mm. AC-104
40326	11"	14 mm. All Makes
40332	i"	18 mm. All Makes

#### AVIATION

40322	11."	B&G &	Char	mpion
40332		B&G &	Char	mpion
40324	3/4"	Benton		
40328	1/6"	Bendix	(scinti	Ila)
See pa	ge 9 1	or Long,	Deep	Nug-





No. 19051

#### IMPORTANT

Do not draw down spark plugs with ordinary wrench. Guesswork may crack porcelain or spread points, reducing life of plug or causing poor firing. Use Torkflash tension wrench for "measured" pulls and proper setting. See page 13.



No. 60028 Series



No. 80034 Series

SEE DOUBLE-DUTY NUGGETS AND SETS — Pages 6 to 13



No. 49980



Nos. 24993 49978 34993 69993



No. 30212 Series

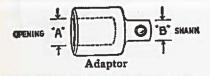




Nos. 49979 34991



No. 69991



SEE DOUBLE-DUTY NUGGETS AND SETS — Pages 6 to 13

Page Twenty

## SOCKETS AND ATTACHMENTS

WKENCHES

#### Selected Alloy Steel—Chromium Plated

#### Stud Setter and Extractor

Used with any standard ½" square drive handle. Has 2 drilled holes for changing position of serrated gear to fit studs from ½" to ¾". Gears are milled and not knurled—thus providing longer life.

No.	List Price
49980	\$3.60

#### Universal Joints

A greatly improved series of universal joints—stock diameter reduced offering more clearance—accessibility increased by shorted over-all length—and full 90° angle to reach awkward jobs.

No.	Sq. Dr.	List Price	No.	Sq. Dr.	List Price
24993	1/4"	\$2,00	49978	34"	\$2,60
34993	3/6"	2,40	69993		6.25

#### Universal Joint Sockets

All Double Hex with 3/8" Square "Lock-On" Drive.

No.	Size Socket	List Price	No.	Socket Size	List Price
30212	34"	\$2.60	30220	1/6"	\$2.60
30214	- 10 "	2.60	30222	11."	2.75
30216	1/2"	2.60	30224	3/4"	2.75
30218	74"	2.60			

#### Screw Driver Bits

Used with any ¾" square drive handle. Very useful on magneto, carburetor and ignition work. Made of special tool steel, properly heat treated and hardened—Chromium plated.

No.	Size of Blade	Length	"Lock-On" Sq. Dr.	List Price
34994	.025"x+"	31/4"	36"	\$1.00
34995	.035"x1/4"	31/4"	34"	1.00
34996	.040"x11"	31/4"	34"	1.10

#### Tie Rod and Screw Driver Attachments

No.	Edge of Blade	Length	"Lock-On" Sq. Dr.	List Price
34991 49979	技"三古" 技"三古"	1"	3/6"	\$0.85 1.00

#### Adaptors

Note new adaptors—Nos. 39964, 49974, 34964 and 39974—enabling use of  $\frac{1}{18}$ " Nugget series with "specials" in  $\frac{3}{8}$ " and  $\frac{1}{2}$ " drives.

Adaptor No.	Female Opening "A"	Used on Handles to	Male End "B"	List Price
39964	36"	Increase to	175 "	\$0.80
49974	16"	Increase to	3/4"	.80
69992	1/2"	Increase to	3/4"	1.25
79998	3/4"	Increase to	7/2"	2.00
89993	3/4"	Increase to	1"	2.40
89992	2/8"	Increase to	1"	2.50
34964	7 **	Decrease to	34"	.80
39974	3/4"	Decrease to	78"	.80
49991	3/4"	Decrease to	1/2"	1.25
69988	7/1"	Decrease to	3/4"	2.00
69990	1"	Decrease to	3/4"	2.90
79999	1"	Decrease to	7/4"	2.50
†69991	3/4"	Decrease to	1/2"	1.40

<sup>†</sup>Ratchet drive adaptor.

BLACKHAWK HANDLES AND ATTACHMENTS Water Pump Pliers Thin tough jaws that work in restricted quarters—long balanced handles curved to fit the hand—five position adjustment with a range from 0 to 2". This handy plier is adaptable for use on water pump packing nuts, brake adjustments and wherever a sure grip is needed. Every service station operator should have one. Length, 9½"—thickness of jaws, ¼". 12001-List Price, each No. 12001 No. 12002 Universal Pliers Ideal for a wide range of uses including adjustments on water pumps, head-light mountings, brakes, battery terminals, etc. Three position jaw adjustment. Length, 7". Thickness of jaws, 12002—List Price, each.....\$2.30 No. HI Universal Ignition Pliers New style Ignition Pliers, with full-fashioned grip handle. Easier to hold and to work with. Especially adapted to ignition service, carburetors, radios and other small jobs. Three position slip jaws provide opening range from 0 to  $\frac{5}{8}$ ". Thickness of jaws,  $\frac{1}{8}$ "; over-all length,  $\frac{5}{8}$ ". No. 2581 H1-List Price, each......\$1.85 Steel-Draulic Brake Pliers Fits all Steel-Draulic Brakes. No. 2583 2581—Overall length 51/4". List Price......\$2.60 **Brake Spring Pliers** For removing and replacing internal brake springs. 2583-Length 121/2". List Price ......\$3.40 Midget Grip Handle 5" long, '4" square friction drive. Has hard rubber handle giving sturdy grip for speed and leverage. Adapted for use with No. No. 24995 24994 as an L wrench.





SEE DOUBLE-DUTY NUGGETS AND SETS-Pages 6 to 13

Page Twenty-one

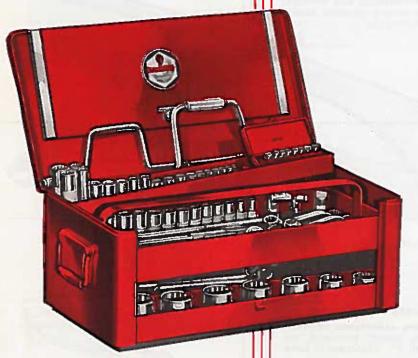
No. 34990—Length 41/8". List Price......\$0,30

24995-Length 5". List Price......\$1.70

"Lock-On" Release Key Used for releasing all "Lock-On" Sockets in the present 3/8" and old style 1/2" and 3/4" square drive series.

#### BLACKHAWK 🗻 WRENCHES

#### NEW BLACKHAWK MASTER MECHANIC WRENCH SET



# THE TREASURE CHEST

The No. 70R Set

Mechanics — here is the glorified Blackhawk Treasure Chest! All dressed up in an improved case—streamlined—with attractive red enameling and chromium fittings. All wrenches feature the new "Gripline" design and have the exclusive "Lock-On" feature,

Design Patent No. 103,914

# Modern — Inside and Out

The new R case is built of strong welded steel. Top cover and front lift in one piece giving full access to the wrenches. Dependable tumbler lock protects tools against theft. Chromium strips—Blackhawk insignia—and your individual nameplate contrast brilliantly with the attractive red case.

The R case is 22½" long, 10" high, 125%" wide.

SEE DOUBLE-DUTY NUGGETS AND SETS—Pages 6 to 13



Contents of 70R
Set

The 70R assortment is the most complete yet compact line-up of essential handles, attachments and sockets ever offered in the regular series.

Sockets range from \$\frac{1}{4}\sigma"\$ to 15\s'\sigma". Handles include ratchet, offset, speeder and extension styles. Yes, a wrench for any job, big or small, delicate or tough.

Black, ribbed-rubber matting covers the roomy compartments and tote trays offering protection against marring or scratching. The R case fits into the RS stand (illustrated on page 23) to make a complete portable workshop.

No.	st Price
70R Set, 70 pieces in R case\$	116.00
R Case Only, 221/2" long, 10" high, 125/8" wide	23.75

BLACKHAWK WRENCHES

NEW BLACKHAWK MASTER MECHANIC WRENCH SET

# THE TREASURE ISLAND

#### No. 80RRS Set

Wheel your wrench workshop right to the job—save time and steps. This new Treasure Island is efficiency on wheels guaranteeing every mechanic better workmanship and bigger earnings.

Customers, too, are impressed with the serviceable appearance and beauty of this assortment.

The streamlined 80RRS provides 80 selected Blackhawk tools, the R case, and the RS stand. The base of the R case slips into the top of the welded-steel RS stand, forming one complete unit. Rubber-tired swivel casters roll the Treasure Island silently and easily over any floor. The stand, with the R case, is 34½" high, 125½" deep and 22½" wide. A large drawer and lower compartment provide plenty of space for overalls, drills, bulky tools, etc. This unit is the finest in modern wrench chest design.





#### Chest Easily Removed From Stand

The R case is quickly removed from the RS stand if the case is to be taken out of the shop. The RS stand is 25" high, 22½" wide and 12¾" deep.

Design Patent Nos. 103,894 & 103,914

See Page 26 for Contents of the 80RRS Set.

SEE DOUBLE-DUTY NUGGETS AND SETS — Pages 6 to 13

ALL LIST PRICES SUBJECT TO DISCOUNT

Page Twenty-three

#### BLACKHAWK WRENCHES

#### NEW BLACKHAWK MASTER MECHANIC WRENCH SETS



#### THE RED ROVER

70DS, 80DS, 90DS and 100DS Sets

Here's a "natural" for the efficient shop! Scoot the Red Rover to the job and you have all tools and necessary equipment at your finger-tips. Customers will know they are served by a top-notch mechanic who does not run up a time-charge by walking around the shop to find scattered tools.

See Page 26 for Contents of 70DS, 80DS. 90DS and 100DS Sets.

Design Patent

#### Shop Owners—Attention!

Dress up your back shop with these attractive and profit producing wrench assortments. Better tools mean better workmanship. Appearances count these days when customers are taking their business to the shop that displays efficient and modern equipment.

There is no finer way to produce new business and keep old customers coming back than to point out a well equipped shop. And Blackhawk wrench chests and stands will more than do their share.

SEE DOUBLE-DUTY NUGGETS AND SETS-Pages 6 to 13

This rolling workshop comes with assortments of 70, 80, 90 or 100 selected Blackhawk tools in its three roomy drawers. The DS stand is 33" high, 30" wide and 16" deep. All drawers slide on rollers and have built-in locks. Black ribbed-rubber matting in drawers and trays prevents tools from rattling and marring

Rubber-tired casters glide the Red Rover over any floorsilently and easily. Drawers have subdivided interiors for keeping sockets and handles in order. This sturdy, welded-steel stand wheels tools and other equipment right to the job, saving countless trips to distant work benches.

There's no surer way to perform better work, get in solid with the boss and cinch your job than to own one of these glorious, complete wrench sets.

No.	List Price
70DS Set, Complete in DS stand	\$148.00
80DS Set, Complete in DS stand	168.00
90DS Set, Complete in DS stand	. 180.00
100DS Set, Complete in DS stand	. 201.00
DS Stand Only, 33" x 30" x 16"-East Coast	65.00
*DS Stand Only—West Coast	71.25

\*West Coast Prices apply in Arizona, California, Idaho, Nevada, Oregon, Utah and Washington.



#### THE BIG CHIEF 90W and 100W Sets

Here is the Big Chief of all wrench cases! Modern design is built into every corner and dimension of the W chest and into every one of the selected tools it contains. This large set is a big "office" for the mechanic who aims to get ahead and make more money!

Design Patent No. 103,912



#### W Case

WRENCHES

This beautiful chest, with tote box and drawers, keeps tools in order and at your finger tips. All drawers are covered with black ribbed-rubber matting—a gleaming contrast with the polished chromium plating of the Blackhawk Wrenches. The streamlined, all-steel case is 27" long, 11½" high and 125% wide—a trim, modernistic beauty that glorifies any work-bench.

The big tool assortments available with the Big Chief Chest (either 90 or 100 pieces) are the most superb matched collections of regular wrenches the master mechanic can buy. A full range of sockets in all popular drives—plus all important socket handles, box-type and open-end wrenches—give the proud owner a one-way ticket to a better job and more money in the bank.

ALL LIST PRICES SUBJECT TO DISCOUNT

See Page 26 for Contents of 90W and 100W Sets

SEE DOUBLE-DUTY NUGGETS AND SETS - Pages 6 to 13

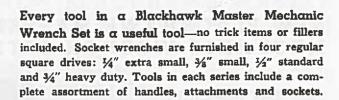
Page Twenty-five

#### WRENCHES

# CONTENTS of Blackhawk Master Mechanic Wrench Sets

Chart below lists and describes all wrench items in sets shown on pages 22, 23, 24 and 25.

FREE MECHANIC'S NAME PLATE FURNISHED WITH EACH SET!



Popular tappet, open-end and box-type wrenches complete these matched assortments—providing a full range of mighty tools to handle all repair work.

#### Contents of Sets Contents of Sets — Continued TOOLS IN SETS: TOOLS IN SETS: | 70R | 80RRS | 90W | 100W | 170DS | 80DS | 90DS | 100DS 70R |80RRS| 90W | 100W |70DS | 80DS | 90DS | 100DS Description No. Description Extra Small Series, 1/4" Square Drive Standard Series, 1/2" Square "Lock-On" Drive 3/" Double Square Socket... 1 3/" Long Db'l Hex Sk't... A" Long Db'l Hex Sk't... A" Long Db'l Hex Sk't... 3/" Long Db'l Hex Sk't... 1" Long Db'l Hex Sk't... 1/" Long Db'l Hex Sk't... 1 " Long Db'l Hex Sk't... 1 1 " Long Db'l Hex Sk't... 1 1 " Long Db'l Hex Sk't... 1 24997 Handle Bar Grip Extension Hinged Offset Ar" Single Hex Socket Ar" Double Hex Socket Ar" Double Hex Socket Metal Case Handle Bar 24998 24999 1 1 40318 40320 21006 40324 21007 40326 21008 40328 21009 21010 21011 21012 21014 Heavy Duty Series, 3/4" Square "Lock-On" Drive Small Series, %" Square "Lock-On" Drive 81/2" Extension ...... 1 69995 69998 69999 34981 34982 34984 60036 Handle Bar Hinged Offset Release Key Screw Driver 60040 34986 60044 34991 60048 Universal Joint Universal Joint 1 Grip Extension 1 A" Single Hex Socket — 3" Double Hex Socket 1 Touble Hex Univ. Jt. Sk't — 60052 34997 30012 30014 30016 Short Double Offset Box-Type Wrenches 38820 ¾" & ¾" Double Hex .... 1 ½" & ¾" Double Hex .... 1 ½" & ‡" Double Hex .... 1 30024 30216 30218 Long Double Offset Box-Type Wrenches 14" & 18" Double Hex .... 1 12" & 74" Double Hex .... 1 12" & 1" Double Hex .... — Standard Series, 1/2" Square "Lock-On" Drive 49978 49979 49983 6" Extension Hinged Offset Handle Bar 10" Extension Free Wheeling Ratchet Tappet Open-End Wrenches 49985 49986 49990 ½" & †" Tappet Wrench — ½" & ‡" Tappet Wrench — ¾" & ½" Tappet Wrench — 49997 Brace Handle 49999 40114 40116 Open-End Wrenches 40118 40119 \$4" & 1-" O. E. Wrench... — 14" & 15" O. E. Wrench... — 14" & 15" O. E. Wrench... — 14" & 15" O. E. Wrench... — 14" & 14" O. E. Wrench... — 15" & 14" O. E. Wrench... — 40120 40122 1027C 40124 10285 40125 40126 40128 40132 40134 Ignition Open-End Wrenches 40212 ↑" & ☆" Ign. Wrench .... — ½" & ↑" Ign. Wrench .... — ↑" & ¾" Ign. Wrench .... — ¾" & ☆" Ign. Wrench .... — 40216 40220 (Continued in next column)

## BLACKHAWK 🗻 WRENCHES

# WRENCH SETS

#### Selected Alloy Steel—Chromium Plated

#### No. 10ND — Midget Set

A new handier ignition set for fine adjustments. Includes new combination grip and offset handle, No. 24999—serves as grip, offset or T or L handle with 24997. Case is enameled Blackhawk Red.

#### Contents of Set:

24997 Handle Bar 24999 Grip Handle and Offset 21006 A." Single Hex Socket 21007 A." Single Hex Socket 21008 1/4" Single Hex Socket	21009 A Single Hex Socket 21010 A Single Hex Socket 21011 Hex Socket 21012 Hex Socket 21014 L Double Hex Socket 21014 L Double Hex Socket
--	--

No.
10ND Set, Complete ......List Price \$7.15
N-4 Case Only, 5½" long, 2½" wide, 1½" high List Price 1.15

#### No. 16ND Ignition Set

A complete new assortment of extra small series socket wrenches, together with five miniature open-end wrenches for delicate work in close quarters. Ideal for repairs on relays, generators, starters, switches and radios; ice machines, oil burners, linotypes and similar precision instruments.

Packed in a convenient metal case that fits into the pocket easily. It's at your finger-tips when needed. Case is enameled Blackhawk Red.

#### Contents of Set:

24994	Obstruction Offset	21011 11" Single Hex Socket
24995	Grip Handle	21012 34" Double Hex Socke
24996	5" Extension	21014 A" Double Hex Socke
21006	A" Single Hex Socket	H10 A"za" Open End
21007	" Single Hez Socket	H12 1/4"x 1/4" Open End
21008	1/4" Single Hex Socket	H14 A"xit" Open End
21009	A" Single Hex Socket	H16 Wat Open End
21010	A" Single Hex Socket	H18 H"xii" Open End

No. 16ND Set, Complete ......List Price \$11.50 N-4 Case Only, 5½" long, 2½" wide, 1½" high List Price 1.15

#### No. 16QD Set

Up-to-the-minute in design and practicability. All sockets are new, thin-wall, straight type for minimum clearance. Includes the new "Free Wheeling" ratchet wrench. Oil burner, refrigerator service men and aeronautical mechanics will welcome the set. All units have 3% square Lock-On Drive. Case is enameled Blackhawk Red.

#### Contents of Set:

34962	Speeder Handle	30010	4"	Single Her Double He	Socket
34981	Ratchet	30012	34"	Double He	x Socket
34987	5" Extension	30014	2."	Double He	x Socket
34984	10" Extension	30016		Double He	
34986	Hinged Offset	30018	+"	Double He	x Bocket
34965	Handle Bar	30020	12"	Double He	x Socket
34993	Universal Joint	30022	11m	Double He	z Bocket
14990	Release Key	30024	1/4"	Double He	z Socket

No.
16QD Set, Complete ......List Price \$24.85
Q Case Only, 18¾" long, 5¾" wide, 1½" high..List Price 3.60

#### No. 13PD Set

Similar to the 17TD but with four less tools and contained in smaller P case. Ideal for quick service work or as emergency kit in trucks and buses.

Contents of Set: Same as 17TD, except has 115/8" Hinged Offset No. 49984. Double Hex sockets same except omits larger sizes, Nos. 40126, 40132, 40134, and 40136. Case is enameled Blackhawk Red.

No. 13PD Set, Complete......List Price \$13.50 P Case Only, 11¼" long, 4 " wide, 1⅓" in. high............ 1.55



No. 10ND Set



No. 16ND Set



No. 16QD Set



No. 13PD Set

SEE DOUBLE-DUTY NUGGETS AND SETS — Pages 6 to 13

# WRENCHES

# WRENCH SETS

Selected Alloy Steel—Chromium Plated

THE JUNIOR TREASURE CHEST—No. 45CB

Expert mechanics themselves helped design this assortment of Blackhawk Wrenches. It's practical, complete, and priced within the reach of every mechanic. Forty-six (46) beautiful chromium plated tools—a full assortment of our latest handles and attachments that help make jobs easier and more profitable.

The "Junior Treasure Chest" Assortment is packed in attractive steel, drop-front chest, enameled red. Name-plate furnished free with the mechanic's name.

#### Contents of Set: Small Series

3/4" Square "Lock-On" Drive

34982 Brace Handle	34984 10" Extension
34986 Hinged Offset	34993 Universal
34985 Handle Bar	34991 Screw Driver
34987 5" Extension	34990 Release Key

Two Single Hex sockets 1/4" and 1/4", Nos. 30008 and 30010. Five Double Hex sockets 3/4" to 5/4". Nos. 30012, 30014, 30016, 30018 and 30020.

Standard Series
1/2" Square "Lock-On" Drive

 49997 Ratchet
 49979 Screw Driver
 49981 Obstr. Offset

 49983 6" Extension
 49994 Speeder
 49985 Hinged Offset

 49990 10" Extension
 49993 Univ. Speeder
 49986 Handle Bar

 49978 Universal
 49993 Univ. Speeder
 49986 Handle Bar

13 Double Hex sockets \$\frac{1}{2}"\$ to 1". Nos. 40114, 40116, 40118, 40119, 40120, 40121, 40122, 40124, 40125, 40126, 40128, 40130, and 40132. Five Double Square Sockets from \$\frac{1}{2}"\$ to \$\frac{1}{2}"\$, Nos. 40214, 40216, 40218, 40220 and 40224. Three Box-Type Wrenches from \$\frac{1}{2}"\$ to \$\frac{1}{2}"\$, Nos. 15612, 15613, and 15614.

45CB Complete .....List Price \$72.00

CB Case Only, 201/2" long, 85/8" wide, 61/2" high
List Price 9.7

#### No. 17TD Set

Special set of Hinged Offset Handle bar and 14 of the most popular Double Hexagon sockets. Units in this set have standard ½" square "Lock-On" drive. Packed in red metal case T. Contents of Set: No. 49986 Handle Bar, No. 49988 18" Hinged Offset. 14 Double Hex Sockets from ¾" to 1½", Nos. 40112, 40114, 40116, 40118, 40119, 40120, 40122, 40124, 40126, 40128, 40130, 40132, 40134 and 40136.

No. 17TD Set, Complete.....List Price \$19.50

T Case Only, 191/8" long, 23/4" wide, 17/8" high List Price 2.00

#### No. 30CD Set

Demand of mechanics for the best in general automotive wrench assortments has made the No. 30CD the most popular wrench set available. Packed in a neat red case to make the best looking bunch of tools any mechanic could desire. Units in this set have standard ½" Square "Lock-On" Drive.

#### Contents of Set:

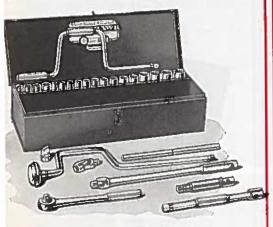
49992	Speede: Brace Ratche	Handle	4998	6 Hand	ed Offse lle Bar Extensio		19978	10" I Unive Drag	real	Joint
14 D	ouble H ze. Same	ex socke	ts, same square so	as in S	et 45CI No. 45C	B with	additio	n of	No. No.	40112 40224
No.	D Set.	Comp	ete				Li	st Pri	ce S	244 0
300										ט.דייק





No. 45CB

No. 17TD S t



No. 30CD

SEE DOUBLE-DUTY NUGGETS
AND SETS - Pages 6 to 13

Page Twenty-eight

# BLACKHAWK 🗻 WRENCHES

## WRENCH SETS

Selected Alloy Steel—Chromium Plated

#### No. 12SD — Heavy Duty Set

Mechanics in truck and bus shops will welcome this handy set of heavy duty wrenches. You'll find a ready market for this set wherever powerful heavy duty tools are used. No chance of sockets slipping. All units have 3/4" Square "Lock-On" Drive. Set packed in handy radiant-red metal case CA.

#### Contents of Set:

60032 60034	Hinged Offset Handle Bar 1" Double Hex Socket 1 h" Double Hex Socket	50044 134" Double Hex Socke 50046 14" Double Hex Socke 50048 134" Double Hex Socke 50052 134" Double Hex Socke
60040	1¼" Double Hex Socket 1¼" Double Hex Socket 1¼" Double Hex Socket	60058 1 1 Double Hex Socke 60064 2" Double Hex Socke

No. 12SD Set, Complete ......List Price, \$35.25 CA Case Only, 201/g" long, 73/g" wide, 51/2" high List Price 5.20

#### No. 14BD — Heavy Duty Set

These powerful heavy duty handles and sockets are just the tools needed on repair and assembly of trucks, tractors, combines, farm and power machinery, graders, pavers and other machine units. No chance of socket slipping from handle end for all units in this set have ¾" square "Lock-On" drive.

All sockets double Hexagon. Contained in husky steel case, No. CA—enameled radiant Blackhawk Red.

#### Contents of Set:

60040 11/4" Double Hex Socket
-------------------------------

14BD Set, Complete ......List Price \$47.60 CA case Only, 201/8" long, 73/8" wide, 51/2" high List Price 5.20

#### No. 12ED — Extra Heavy Duty Set

No nut or bolt too tough for this set. An industrial service and maintenance set designed to provide greatest strength and utility. All units have 1" Square "Lock-On" Drive.

Large socket range and practical handles, ratchet and extensions adapt this set to unusual requirements. Ideal for machinery installation, industrial Diesel service, oil and mine equipment, etc. Positive "Lock-On" feature insures safety and prevents sockets and attachments from falling off.

#### Contents of Set:

89999	Ratchet	80046	17."	Single Hex	Socket
89998	Offset Adaptor Head	80052		Single Hex	
69997	Handle Bar for 89998	80058		Single Hex	
69996	9" Extension	80064	2**	Single Hex	
89995	18" Extension	80070	2+	Single Hex	
80040	11/4" Single Hex Socket	80076		Single Hex	

This set finished in cadmium, Chest enameled Blackhawk Red.

12ED Set, Complete ......List Price \$72.90 E Case Only, 231/2" long, 7" wide, 41/4" high...List Price 10.35

ALL LIST PRICES SUBJECT TO DISCOUNT



No. 12SD Set



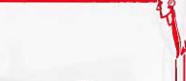
No. 14BD Set



No. 12ED Set

SEE DOUBLE-DUTY NUGGETS AND SETS — Pages 6 to 13

# WRENCHES





No. 15612 Series

# **BOX-TYPE WRENCHES**

#### Selected Alloy Steel—Chromium Plated

This new modernistic series of box-type wrenches are beautiful in appearance and unusually rugged for the toughest jobs. Note their comfortable Gripline handles-accurate broachperfect balance—and slim heads to get into cramped quarters and over or under obstructions.

#### Double Offset - Short

No.	Opening	Opening Length			
15612	36"×4"	435"	\$0.95		
15613	3/4"×₩"	53/4"	1,00		
15614	5/6"=}}"	6"	1,10		

#### Double Offset - Long

Five new wrenches increase range from 3/4" up to 23/4".

15620	3/4"× 2/4"	121/2"	\$1.70
15622	3/6"× -₹6"	756"	1.00
15623	1/2"× 1/2"	8%"*	1.10
15624	5/4"× 11"	934"	1.30
15625	34"x 35"	111/4"	1.50
15626	18"x 7/4"	121/4"	1.70
15627	11 "x1"	141/4"	2.00
15629	1" x1 1s"	161/4"	3.20
15630	156"x154"	161/4"	4.15
15829	154"x136"	181/2"	4.55
15830	17 "x154"	23"	6.00
15831	1 13 "x2"	243/4"	9.75
15832	2 1 "x236"	26"	11.50
15833	2 % "x23/4"	28"	18.08

#### **Angl-Head Style**

15632	36"= A"	734"	\$1.00
15633	34"× 14"	834"	1.10
15634	56"x 11"	934"	1.30
15635	34"× 11"	1134"	1.50
15636	76"= 11"	1234"	1.70
15637	1" 211"	1436"	2.00
15638	136"x134"	17"	3.85
15639	1#"x136"	1734"	4.85

#### Half and Half Style

Combination open-end and box-type in one wrench. A handy double duty wrench for quick adjustments and tune-up work. Each end has the same size opening offering a double attack on stubborn nuts.

15647	75"	5"	\$1.15
15648	35"	51/4"	1.25
15649	A."	53/4"	1,45
15650	56"	61/4"	1.60
15651	33"	7"	1.90
15652	34"	8"	2.30









SEE DOUBLE-DUTY NUGGETS AND SETS—Pages 6 to 13

# BLACKHAWK 🗻 WRENCHES

# STUB END BOX-TYPES

#### Selected Alloy Steel—Cadmium Plated

Heavy duty box wrenches for truck, tractor, industrial and construction work. Excellent for rear axle nuts on trucks because straight-line pull gives greater leverage. Work in close quarters—do not spread—do not burr nuts. Fit where bolts proturde above nut. Selected steel — cadmium-plated — heat-treated.

Furnished in either straight or offset shanks. Shank locks into substantial handles for long leverage. All double hexagon openings.

#### Straight Type

No.	Opening	Use Handle No.	List Price	No.	Opening	Usa Handle No.	List Price
15680	18" ]	15741	\$2.70	15691	134"	15744	\$6.35
15681	1"	15741	2.70	15692	138"	15744	6.50
15682	1 1/4"	15742	3.10	15693	136"	15744	8.00
15683	136"	15742	3.10	15694	2"	15744	8.00
15684	13/4"	15742	3.35	15695	2-1-"	15744	9.50
15685	14."	15743	3.75	15696	23/4"	15745	10.00
15686	136"	15743	4.85	15697	236"	15745	11.25
15687	14"	15743	4.85	15698	2 % "	15745	14.60
15688	15/4"	15743	5.85	15699	23/4"	15745	15.90
15689	1&"	15743	5.85	15700	211"	15745	16.70
15690	156"	15743	6.10	15701	356"	15745	17.50

#### Offset Type

15710	11"	15741	\$2.95	15721	134"	15744	\$7.60
15711	1"	15741	2.95	15722	1117	15744	8.00
15712	111	15742	3.50	15723	17/6"	15744	9.20
15713	136"	15742	3.50	15724	2"	15744	9.20
15714	154"	15742	3.75	15725	218"	15744	10.50
15715	14"	15742	4.20	15726	23/4"	15745	11.25
15716	136"	15743	5.85	15727	236"	15745	12.50
15717	14"	15743	5.85	15728	24"	15745	15.90
15718	134"	15743	6.25	15729	23/4"	15745	17.10
15719	14"	15743	6.25	15730	218"	15745	18.00
15720	156"	15744	7.25	15731	356"	15745	18.75

#### **Tubular Handles for Stub-Ends**

No.	Handle Length	Assembled Length	Outside Dia.	Inside Dia.	List Price
15741	15"	23"	##"	56"	\$2.50
15742	18"	24"	V."	11."	2.65
15743	24"	35"	111"	3/4"	3.75
15744	30"	41"	11/4"	1,0	5.40
15745	36"	521/4"	170"	156"	8.25

#### Half-Moon Box-Type

The wrench every mechanic needs—it sneaks around corners and in-between or in-betwixt most any place. Just the wrench for generator and starter mountings, manifolds or exhaust nuts and other tricky places.

15659 15660	1	%"=%" }}"=%"	73/4" 73/4"	\$1.70 2.25

ALL LIST PRICES SUBJECT TO DISCOUNT



Stub Ends — with long handles locked to shank — furnishes full leverage for heavy pull.



SEE DOUBLE-DUTY NUGGETS AND SETS — Pages 6 to 13

## WRENCHES



No. 19056 Set



No. 19057 Set



No. 19058 Set



No. 19059 Set

SEE DOUBLE-DUTY NUGGETS AND SETS — Pages 6 to 13

Page Thirty-two

# BOX-TYPE WRENCH SETS

#### Selected Alloy Steel—Chromium Plated

#### No. 19056 Set

This handy set of three short double offset wrenches fits right in the mechanic's pocket. A knockout for battery, tire valve and manifold nuts—starter, generator, water pump and other mountings.

#### Contents of Set

15612 16"x 16" Opening 15613 16"x 16" Opening	15614	%"×11"	Opening
15013 %"x4" Opening			

No. 19056 Set, Complete in Cardboard Box.....List Price \$3.05

#### No. 19057 Set

Here's a dandy set of six long double offset box-type wrenches that can't be beat for every tricky job that calls for a deep offset, short bites and plenty of leverage. Careful and accurate double hexagon broaches never round out—thin walls sneak into close quarters—and comfortable handles make the job easy.

#### Contents of Set

15622 34"x4" Opening 15623 34"x4" Opening 15624 54"x11" Opening	15625 ¾"x¾ 15626 ¾"x¼' 15627 ¾"x 1	Opening Opening
---	--	-----------------

No. 19057 Set, Complete in Cardboard Box.....List Price \$8.60

#### No. 19058 Set

Angl-Head wrenches offer a unique design for tough jobs. These neat compact wrenches can be used in places with low overhead clearance. There is a straight line power pull on the nut—no twisting pull like offset types.

#### Contents of Set

15632 15633	36"×6" 1/2"×6" 1/4"×14"	Opening Opening	15635 15636 15637	1/2 11/2"	Opening Opening
13034	78 ×18	Opening	13037	. I will	Obermi

No. 19058 Set, Complete in Cardboard Box.....List Price \$8.60

#### No. 19059 Set

A set of the handiest wrenches any mechanic can own. Combination of open-end and box-type in one wrench tackles many tricky jobs where other tools fail. Ideal for battery shops, tire dealers, filling stations, radio men, service men and mechanics.

#### Contents of Set

15647 15648	14"	Opening Opening	15649 1 15650 %	" Opening " Opening

No. 19059 Set, Complete in Cardboard Box.....List Price \$5.45

#### No. 19074 Set

Six half-and-half wrenches—including the four wrenches in No. 19059 Set, plus No. 15651 with 11 opening and No. 15652 with 34" opening.

Na. 19074 Set, Complete in Cardboard Box.....List Price \$9.65

ALL LIST PRICES SUBJECT TO DISCOUNT

LUBRICATION SERVICE TOOLS

The "ADJUSTO" No. 151

Adjustable to fit all drain plugs, square or hex, male or female. Used universally on all transmissions, differentials, shock absorbers, gasoline tanks and vacuum tank drain and filler plugs. Jaws adjustable by a twist of thumb on knurled sleeve-not on handle grip as with ordinary drain plug wrenches. Practical 9" length - selected steel - cadmium plated. Adjustable sockets and plugs to fit-hex male plugs, 7/16" to 11/2"; square male plugs, 3/16" to 11/4"; square female openings, 5/16" to 1".

.....List Price, \$4.35

#### The "MULTI-PLUG" No. 152

One-piece - handy and compact - fits practically all female plugs on every car. Length, 8"—forged of chrome nickel steel—heat treated for strength cadmium plated finish.

Has the following sized plugs—A", ½", ½", ½", ½", ½" square, and ½" hexagon.

No. 152.....List Price, \$2.30

#### SPECIALS—FOR FORD and CHEVROLET

Sockets and handles for connecting rods, oil pans, axle nuts, etc., are shown in regular listings if they are not exclusively Ford and Chevrolet "specials."

# New Ford & Mercury Drain Plug Wrench

Fits 1939 Ford, Mercury and Zephyr, 2" hexagon opening. 18" square opening fits transmission drain and filler plugs in entire Ford group, 101/2" offset handle.

No. 15798. .....List Price, \$0.80

#### Ford Brake Adjusting Wrench

4016—For all models. Db'l sq. openings—18" & 1/2"..\$1.90

#### Ford Main Bearing Wrench

4124—3/4" Hex—Models A, AA, B, AAB & 18 ......\$1.00

#### Ford Oil Pan Wrench

4316—1/2"—All models except 60 and 85 .....\$1.10

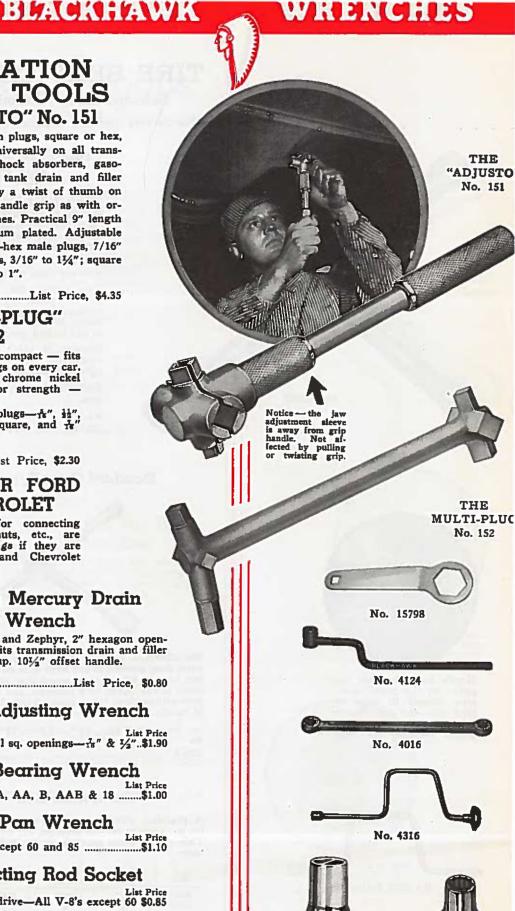
#### Ford Connecting Rod Socket

No. List Price 40199—% opening—1/2" drive—All V-8's except 60 \$0.85

#### Chevrolet Oil Pan Socket

34992—Screw driver socket - 3/8" drive - Fits all Chevrolet oil pans .....\$1.25

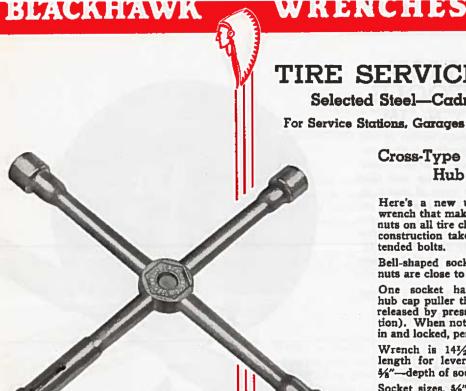
ALL LIST PRICES SUBJECT TO DISCOUNT



No. 34992



Page Thirty-three



No. 5204Z

# TIRE SERVICE TOOLS

Selected Steel—Cadmium Plated

For Service Stations, Garages and Car Owners

#### Cross-Type Rim Wrench with **Hub Cap Puller**

Here's a new universal cross type rim wrench that makes easy work of removing nuts on all tire changes. Extra deep socket construction takes all nuts, even with ex-

Bell-shaped sockets sneak in where rim nuts are close to the hub wall.

One socket has built-in spring-backed hub cap puller that slides out easily when released by pressing button, (see illustra-tion). When not in use, plunger is pushed in and locked, permitting use of the socket.

Wrench is 141/2" over-all — plenty of length for leverage. Diameter of handle 5/8"—depth of sockets 15/8".

Socket sizes, 5/8", 3/4", 18" and 7/8" Hexagon.

5204Z .....List Price, \$4.50



# Here's how the hub cap puller on the 5204Z oper-ates. Simply fit edge be-hind cap—and pull. Screw driver doesn't fit because of deeply recessed hub cap.



SEE DOUBLE-DUTY NUGGETS AND SETS-Pages 6 to 13

#### Standard Cross-Type Wrench



No. 5204X-The master of all rim nut jobs. Equipped with extra deep sockets to get both nuts on tire carriers. Will handle any rim nut job whether wood, disc, or wire wheels. Put one of these in the hands of a prospect and the sale is made. Special over-all length of 141/2" gives all the clearance needed. Diameter of handle 5/2" — Depth of sockets 15/2".

Socket Sizes 3/8" - 3/4" - 18" - 7/8" Hexagon No. 5204X .....List price, \$4.00

#### Car Owner Rim Wrenches

A practical series of popularly priced rim wrenches. Ideal for car owners, service stations, car wreckers and replacements. Thin socket walls sneak in to reach lug nuts on all new style

No.	Socket Size	Stock Dia.	Shank Length	Sweep	List Price
5220	56"	34"	53/4"	47/6"	\$0.65
5222	11"	34"	53/4"	47/4"	.65
*5224	3/4"	3/4"	53/4"	43/6"	.55
*5226	11"	3/4"	53/4"	43/6"	.55
5228	1/4"	3/5"	53/4"	43/4"	.65

\*Non-replaceable.

#### BLACKHAWK 🗻 WKENCHES

# TIRE SERVICE TOOLS

Selected Steel—Cadmium Plated For Trucks and Buses

#### Universal Truck Rim Wrench

(Cross Type with 6 Socket Sizes)

A rim tool that will handle 90% of all truck rim nuts, including latest model Ford and Chevrolet Trucks. A powerful tool, 3/4" dia. shanks with an over-all length of 23". Equipped with hole through center for use of No. 5401 pry bar to provide added leverage.

Socket sizes— $\frac{7}{8}$ ",  $1\frac{1}{16}$ ",  $1\frac{1}{4}$ ",  $1\frac{1}{2}$ " Hexagon,  $\frac{5}{8}$ " and  $\frac{1}{8}$ " Square.

Back of 11/4" hex socket is broached 11 square for Model AA Ford and Budd-Michelin Rims. Back of 7/8" Hex socket is 5/8" square for 1931-32 Chevrolet Truck rims.

No. 5206 Without No. 5401 Pry Bar...List Price, \$9.00 5401 Pry Bar .....List Price, 1.40



#### Truck and Bus Rim Wrenches

Changes in tire sizes and wheel designs created need for extra-long rim wrench. This series is now 2" longer to handle modern vehicles.

No. 5448—For Ford AA Trucks, Budd-Michelin Wheels, Budd Duals, Dayton Spokesteel Wheels, change-overs, and deep dual discs.

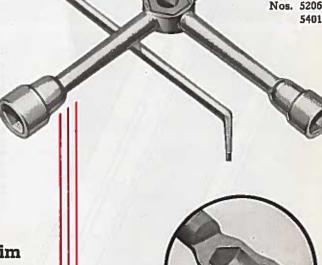
No. 5440—Has 1/6" hex opening for 1933-34 Trucks, also 1931 and 1932 Chevrolet Trucks. Has square openings for rear wheel rim studs, and two hex openings for front and rear wheel rim nuts.

No. 5434—For all other truck and bus rim nuts and trailers with pneumatics.

No. 5401—Used as pry bar and to provide leverage to break loose those frozen nuts.

No.	Socket Sizes	Stock Dia.	Length	List Price
†5448 †5440 †5434 5401	il" Sq., 114" & 114" Hex 54" Sq., 14" & 114" Hex 11" & 116" Hex Pry Bar only	7/6" 7/6" 7/4"	16½" 16½" 16½" 20"	\$3.00 2.60 2.60 1.40

†Does not include No. 5401 Pry Bar.



Sockets of 5204X, 5204Z and 5206 are bell-shaped with extra deep broach as shown. Plenty of room to take long bolts on tire carriers, etc.



For convenience, sockets on 5440, 5448 and 5206 are double broached as a hown. Square opening inside of hex eliminates extra tool.

SEE DOUBLE-DUTY NUGGETS AND SETS — Pages 6 to 13



Actual size of No. 4729 Hexite Open-End. Dotted line shows size of old-style wrench also having %" and 4" openings.

## ENTIRELY NEW DESIGN

At last — a series of Open-Ends designed especially for automotive work! Mechanics no longer need use "Engineers Wrenches" adapted to machine bolt and nut sizes. No improper size combinations and excess weight to retard work and increase tool investment. Following are the 13 new Blackhawk-designed Open-Ends-made under the famous Blackhawk-Armstrong trade name:

No.	Milled Openings	Overall Length	Head Thickness	List Price
4020	1/4"— fe"	41/4"	84"	\$0.55
4721	1x"— 3/a"	43/4"	11"	.60
4723	3/8"— 18"	51/4"	7,"	.70
4725	1/3″ 1/3″ 1	57/8"	372" 15"	.90
4725B	1/2"— 18"	61/2"	1/4"	1.00
4727	18"- 5/8"	71/4"	17"	1.10
4729	5/0"_ 3/4"	8"	12"	1.35
4028	18"- 35"	8"	12"	1.35
4730A	11 "- 11 "	83/4"	3."	1.65
4731A	3/4"_ 7/8"	91/2"	18 " 18 "	1.75
4033C	18"-1"	101/2"	21"	2.40
4735A	116"-11/8"	111/2"	83"	2.85
4737	11/8"-11/4"	121/2"	3/8"	3.30

(See complete series illustrated on opposite page)

# LESS WEIGHT AND BULK! **GREATER LEVERAGE!** LONGER LIFE!

New Blackhawk-Armstrong Open - Ends are made of HEXITE (strongest tool steel known)—hence their thinner heads; pear-shaped jaws; comfortable, thin handles; lighter weight, better balance and longer wearing qualities. Perfect companions to Nugget socket wrenches, also made of Hexite.

#### BEAUTIFULLY FINISHED

New HEXITE Open-Ends sparkle with rich brilliance. Flawless heads are buffed

and polished — handles are satin finish. (Ordinary wrenches are usually not plated because bigh finish emphasizes flaws and defects.) Each wrench is scientifically heat treated. Openings are accurately milled and, because of harder steel, will not round out as easily as ordinary open-ends.

ALL LIST PRICES SUBJECT TO DISCOUNT

5/8 Actual size — %" end, No. 4729. Full leverage on square and hexagon nuts. Pear shaped jaws do HEXITE not extend be-

yond the nuteliminating all

interference.

Page Thirty-six

Side view No. 4729. Hex-te Open - Ends ave thinnest heads on the

merket.

section of No. 5729 (above).

Comfortable,

curved grip. Greeve re-

duces weight.

# MADE OF HEXITE-*ME Magic Steel* SLIMMER — THINNER — TOUGHER



BLACKHAWK-ARMSTRONG

Page Thirty-seven

#### BLACKHAWK 🗻 AKMSTRONG

# OPEN-END WRENCHES

Selected Steel — Chromium Plated

#### **Economy Series Tappet Wrenches**

A fine series of reasonably priced tappets, welcomed by every mechanic. Long and thin—they slip in easily where clearance is small. Forged of the best alloy steel—and chromium plated. Openings at 15° angle.

No.	Milled Openings	Length	Thickness of Head	List Price
420 422	技工整備	8"	2-	\$0.75 .75
424		81/4"	117	.80
426	94"-78"	A.,	1111"	1.00

#### **Economy Tappet Set**

Contains two each Nos. 422, 424, 426

No.			
22CB-In	Cardboard Box. 1	List Price	
		List Price	

#### Regular Series Tappet Wrenches

Two styles provided: Same size opening on both ends, or different size openings on same wrench. Balanced design makes it easy to use three at once while adjusting tappets—two worked as scissors in one hand, and a third in the other. One end offset at 22½° angle—other straight.

402 403 404 405	7/2" 7/2" 7/2" 1/4"	8½" 8½" 8½"	↑" • • • • • • • • • • • • • • • • • • •	\$0.75 .75 .80 .80
402B 402C 404B 404C 406B 406C	Augle End	81/4" 81/4" 81/4" 9" 9"	**************************************	.75 .75 .80 .80 .85

#### Special Long Tappet Wrenches

Many new model cars require these long tappet wrenches. 100A and 100B have single end opening. 200AB has double end opening.

100A 100B 200AB	1/2" 1-1"	15" 15" 15"	**	\$2.00 2.00 2.60
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#### **Tappet Wrench Sets**

#### Nos. 412CB and 412LR

Contain two each Nos. 402, 403, 404 and 405. These wrenches have same sized opening on each end.

No.	
412CB-In	Cardboard Box. List Price\$6.20
412LR-In	Leatherette Roll. List Price

#### Nos. 400CB and 400LR

Smaller set than above, but with more sizes. Wrenches have different sized openings on each end.

Contain one each Nos. 402B, 402C, 404B, 404C, 406B, 406C,

No.			
400CB—In	Cardboard Box.	List Price\$4	.80
400LR-In	Leatherette Roll.	List Price 5	50

#### Brake Wrench

For Eccentric Cam or Bendix Internal

No.	Opening	Length	Thickness	Price
2561	- 1 to 3/4"	9"	₹1"	\$1.80

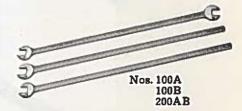
ALL LIST PRICES SUBJECT TO DISCOUNT



Economy Series Tappets



No. 22LR Set





No. 412LR



SEE NEW AUTOMOTIVE OPEN-ENDS—Pages 36 and 37



Engineer's Wrenches

(For illustrations of NEW Automotive Open-Ends—See pages 36 and 37.)



No. 26LR Set



No. 20LR Set



No. 18LR Set

SEE NEW AUTOMOTIVE OPEN-ENDS—Pages 36 and 37

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# ARMSTRONG

# OPEN-END WRENCHES

Selected Steel — Chromium Plated

#### Engineer's Wrenches

Handy wherever there's a tough nut to turn on cars—trucks—tractors—farm implements—or industrial equipment. (See pages 36 and 37 for New Automotive Open-Ends.)

No.	Openings	Extreme Length	Thickness Heads	List Price
1020	1 1/4"- A"	3"	1 A" I	\$0.50
1721	1 1 1 1 1 1	51/6"	118"	.55
1021	# # # # # # # # # # # # # # # # # # #	51/3"	1 11 1	.55 .55
1722	カル マル	534"	H ###	.55
1723 1022	20, 13,	373	47,0	,33
1023	H-1 2-	6"	37"	70
1723A	2"- 2"	6"	Z*	.79 .70 .70 .80
11024	18"- 18"	634"	1/4"	.80
1024 1725	1 74"- 34"	634"	1/4"	.80
1725A	14"- th"	634"	34"	.80
1725B 1025	1 %"- tt"	674"	24"	.80
1025	297-197	61/4"	14"	.86
1726	77	211	23 "	1.00
1026 1727	2" 12"	7"	37 /	1.00
1027	1111 1111	7"	2"	1.00
1027C	第"- 44"	7"	3."	1.00
1728	#"- 1/4"	8"	1 1	1.20
1026	1 44"- 44" 1	8"	0.	1.20
10268	547-337 [	8"	†°	1,20 1,20
1729 1029	75 - 75	8" 8"	n.	1.20
1029	1 技術 技術	8"	Y.,	1.20
1030	32" 12"	934"	12.	1.60
1731 1731A	12"- 12"	914"	42"	1.60
1031	11 "- 1/4"	91/2"	34"	1.60 1.60
1031 1731B 1032	18"- 1/4"	934"	36"	1.60
1032	1 317-317	934"	36."	1.60
1033A 1033 1733	19:- 11: 1	955	25"	1,60 1,60
1033	177, 38	1032"	78 "	2.20
1033C	10 11 11	1034"	至"	2.20
10336	72"-13"	1032"	\ \\ \\ \\ \ \ \ \ \ \ \ \ \ \ \ \ \ \	2,20
1734	7/4"-11/4"	103/4"	7."	2.20
1035	117-17-7	1034"	16"	2.20
1034 1734 1035 1735	1" -136"	1214"	36"	3.00
1036 1736	13"-134"	1234"	75"	3.00
1736	1" -153"	1234"	75"	3.00
1037 1737	12	1254"	14"	3.00
1191	1 478 -174	1474	74	

#### Engineer's Wrench Sets

Contains one each Nos. 1723, 1025, 1027C, 1028S, 1731A and 1033C.

No. 26CB—In Cardboard Box List Price \$7.35

No. 26LR—In Leatherette Roll List Price 8.20

(See New Open-End Sets—pages 36 and 37.)

#### Miniature Wrenches and Sets

These Miniature Wrenches take the fight out of the stubborn baby nuts. Ideal for every small delicate job.

No.	Milled Opening	Length	Thickness of Head	List Price
H-10 H-12 H-14	· · · · · · · · · · · · · · · · · · ·	2½" 3" 3¾"	Ŷ.	\$0.55 .55 .60
H-16 H-18	N. 2 1.	437"	***	.60 .60

No. 20CB—One each of above. In Cardboard Box....List Price \$2.90 20LR—One each of above. In Leatherette Roll..List Price 3.30

#### Ignition Wrenches and Sets

These tools meet with the approval of Ignition experts. All tools shown are neatly contained in the two-tone gray-green leatherette case.

No.	Size Opening	Price
E-2	14" & 14"	\$0.55 .55 .55 .55 .85 .70 .70
E-2 E-3 E-4 E-5 E-6 E-7 E-8 E-9 E-10	34"(33"&畫")	.55
E-5	18"	.55
E-6 E-7	J." (1/4")	.70
E-8	12" (1/4") 12" & 12"	.70
E-9 E-10	34" A 11"	.70
E-11	1/4" & \$3"	1.10

No.

18CB—One each of above. In Cardboard Box....List Price \$6.95

18LR—One each of above. In Leatherette Roll, List Price 7.65

ALL LIST PRICES SUBJECT TO DISCOUNT



#### No. 15119 CROSS TYPE

Every mechanic, tire dealer, service station and filling station needs this speedy four-in-one Rim Wrench. Extra deep sockets-bell shapedtackle any nut whether on the wheel or tire carrier. They sneak in on tricky jobs-inside the hub-and take the fight out of the toughest nut.

Designed for general car use — overall length 13½". Socket openings—5/8", ½", ¾" and 7/8" Hex.

No. 15119 ..... List price \$1.75

#### BUS TRUCK AND

You can't beat these sturdy rim wrenches on any job requiring a tough pull and plenty strength. A handle bar provides extra leverage to break loose frozen nuts. Ideal for trucks, trailers and buses. Price below does not include 15140 handle bar.

No. 15137-For general truck, bus and trailer rim nuts.

No. 15138—For Chevrolet trucks. Has square openings for rear wheel rim studs and Hex for front and rear rim nuts. Length-

No. 15139—For Ford AA trucks—Budd-Michelin, Budd Duals, Dayton, Spoke-steel, changeovers and deep dual discs. Length-

No. 15140—Handle Bar for above wrenches. 18" long, 3/4" stock diameter. List price ......\$0.60

BLACKHAWK MFG. CO. MILWAUKEE, WISCONSIN U.S.A. Wrench Specialists